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Preservice teacher attitudes and intentions toward an inclusive educational environment: An application of the theory of planned behavior

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PRESERVICE TEACHER ATTITUDES AND INTENTIONS TOWARD AN
INCLUSIVE EDUCATIONAL ENVIRONMENT: AN APPLICATION
OF THE THEORY OF PLANNED BEHAVIOR

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Curriculum & Instruction

by
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December 2009

Accepted by:
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ABSTRACT

The purpose of this research project was to identify preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment. A survey instrument was created based on Ajzen and Fishbein's theory of planned behavior and disseminated to three universities in South Carolina. This study improves upon existing studies of preservice teacher attitudes because it takes place at more than one institution and is grounded in a theory that explores the many- layered aspects of attitude.

Preservice teacher attitudes were moderately positive on all measures: behavioral beliefs, subjective norms, and perceived behavioral control. Specific responses describe an altruistic and civic- minded group of future educators. Respondents indicated a near neutral attitude towards the use of research- based practices. Interaction of scores for ease of use and likelihood of use for research- based practices was also near neutral.

Three conclusions were drawn from the findings of this study: (1) Programs of higher education are succeeding in their mission to graduate citizens with a sensitivity for the problems of others, committed to the betterment of society. (2) Programs of higher

education need to evaluate the ways in which research based practices are taught. (3)

Preservice teachers may believe they have complete volitional control over factors within the inclusive environment.

DEDICATION

This dissertation is dedicated to my husband, Charles, who has supported me through this long process, put up with late night classes and long distance commutes, and has taken our girls out so I could stay home and write. I will always be grateful for his love, patience, support, and encouragement to complete my studies. Thank you for believing in me. I also include our children, Charlee Ann and Mary Caroline, in this dedication because they were so sweet to let me rock them in one arm and type with the other. Their refusal, Charlee Ann's in the beginning, and Mary Caroline's at the conclusion, to let me put them down kept me grounded in front of my computer while each slept peacefully on my lap through the writing of much of this work.

I wish to thank my brother, Jeff, who serves as a constant goal-setting inspiration to me. It is from Jeff that I learned no goal is too big to accomplish if you set your mind to it. Thank you to my mom for her love and keeping the girls to give me time to write; thank you to my dad for believing in me and telling me so.

ACKNOWLEDGEMENTS

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The faculty of Clemson University's School of Education has provided me with an excellent graduate education. Through them, I have learned to think independently and approach my work as a scholar.

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Chapter 1 The Problem Statement

Introduction

I am so overwhelmed. There are 20 students in my practicum class, three of whom are classified as gifted and talented. Four students receive supplemental services and are pulled from their library and computer lab times in the afternoon for their resource class. The teacher is given three and a half hours to teach 5 subjects, and she is eligible for bonus pay if her student test scores increase. How can I possibly meet the needs of all these students? I wasn't trained for this in my classes at college!

- Lisa, junior year

No Child Left Behind (NCLB), signed into law on January 8, 2002, is the government's response to the low academic achievement of America's students (Yell, Drasgow, & Lowrey, 2005). Leaders at this time note that despite the \$130 billion spent on education since the Elementary and Secondary Education Act was passed in 1965, educators have not successfully reduced the achievement gap between low and high income students or between minority and non- minority students (Office of the Press Secretary, 2002). For example, National Assessment of Educational Progress (NAEP)

reading and math achievement scores for the 2006-2007 school year show a loss in each category (white, black, Hispanic, low income) from fourth to eighth grade (see table 1.1 and table 1.2) with white students demonstrating academic superiority in both subject areas: a difference of at least 22 percentage points in reading and math (National Assessment of Educational Progress, 2008b).

Table 1.1 NAEP: America's Reading Achievement 2006-2007

	% of 4th Graders Basic	% of 4th Graders Proficient	% of 8th Graders Basic	% of 8th Graders Proficient
All	66%	32%	73%	29%
White	77%	42%	83%	38%
Black	46%	14%	54%	12%
Hispanic	49%	17%	57%	14%
Low Income	50%	17%	58%	15%

Table 1.2. NAEP: America's Math Achievement 2006-2007

	% of 4th Graders Basic	% of 4th Graders Proficient	% of 8th Graders Basic	% of 8th Graders Proficient
All	81%	39%	66%	32%
White	91%	51%	77%	42%
Black	63%	15%	46%	14%
Hispanic	69%	22%	49%	17%
Low Income	70%	22%	50%	17%

Source: 2007 National Assessment of Educational Progress (NAEP) Data

Another report notes that this gap has persisted for over half a century, beginning at the fourth grade and widening every year (Hirsch, 2001). One goal of NCLB is for all students to reach high standards of proficiency or better in reading and mathematics by the year 2013-2014 (South Carolina Department of Education, 2006). This target is especially worrisome for teachers of students with disabilities. Students who are already struggling to achieve grade level tasks are under increased pressure to perform (Yell & Katsiyannis, 2004). National reading scores in 2007 indicate that 65% of students with disabilities scored below basic on the national assessment while only 22% of students

without disabilities scored below basic (National Assessment of Educational Progress, 2008a). As of 2002-2003, only 52% of students with disabilities graduated high school with a diploma (US Department of Education, 2005). With national graduation rates for students with disabilities being close to half, it is evident that this population continues to face barriers in their attempts to access the general education curriculum.

Historically, general and special education services have been provided in two distinctly separate educational settings; not only was each setting geographically disparate, but the instruction occurring within the classroom walls was different as well (Shippen, Crites, Houchins, Ramsey, & Simon, 2005). Since the passing of NCLB and the reauthorization of IDEA in 2004, more and more students with disabilities are being included in the general education classroom for content area instruction (D. Jobe, J. Rust, & J. Brissie, 1996). According to a 2001 report by the Office of Special Education Programs (OSEP), 75% of students with disabilities spend more than 40% of their day in general education (Office of Special Education Programs, 2001). Since this report, the amount of students with disabilities spending 80% or more of their time in the general education classroom has risen to more than half (52.1% in the 2004-2005 school year) (US Department of Education, 2007). General educators had an average of 3.5 students

with disabilities on their caseload in 2001, and those numbers have increased in the ensuing years (Office of Special Education Programs, 2001; US Department of Education, 2007). The general and special education worlds are coming together as inclusion rates increase. One report notes states who had a relatively low inclusion rate in 2005 increased this rate *significantly* by the year 2007 (Kitmitto & Bandeira de Mello, 2008).

There are two clear catalysts behind the increase in the number of students with disabilities placed in the general education setting for primary content instruction: legislative mandates and state and national testing.

First, the inclusive model is a direct result of legislation beginning with the Education for all Handicapped children Act (PL-94-142) in 1977, later reauthorized as IDEA in 1997 and finally IDEIA in 2004. In 1997, IDEA mandated that the general education classroom be the first placement option considered for students with disabilities. This requirement not only called for a justification of exclusionary programs, but also questioned the existence of the separate education settings previously considered norm (Shippen et al., 2005).

Another cause for the gaining popularity of the inclusion model is high stakes testing. For over two decades there has been an increased emphasis on improved academic outcomes for students across the country (Katsiyannis, Zhang, Ryan, & Jones, 2007). IDEA requires students with disabilities to be included in district and statewide assessments. States must report the numbers of students with disabilities taking regular assessments, taking the assessment with accommodations, and those taking alternate assessments.

The inclusive education movement has been a contentious policy reform. Special education advocates have argued that students with disabilities need specialists in the classroom in order to meet their educational needs (D. Fuchs & Fuchs, 1994; Kauffman, 1994). Others have argued that “typical” students will suffer from the distractions of an inclusive educational environment (Zollers, Ramanathan, & Moonset, 1999). Much of the debate is due to teachers in inclusive classrooms being underprepared for the demands of such a heterogeneous educational environment (Avramindis, Bayliss, & Burden, 2000; Coates, 1989; Henderson, 1994; Scruggs & Mastropieri, 1996; Villa, Thousand, Meyers, & Nevin, 1996; Zollers et al., 1999).

As the service model for instruction of students with disabilities transforms, teacher preparation programs must reconsider how they prepare future teachers for this evolving classroom environment (Shippen et al., 2005). New teachers must be trained in research based instructional methods to meet the needs of a heterogeneous classroom (Hudson & Glomb, 1997; Jobling & Moni, 2004; McHatton & McCray, 2007; Shippen et al., 2005; Yell, Shriner, & Katsiyannis, 2006). Also, skills for professional collaboration are necessary in order to work with other service providers involved in the educational process (e.g. speech therapists, paraprofessionals, mental health caseworkers, curriculum specialists) (Friend & Bursuck, 1999; Hudson & Glomb, 1997; Shippen et al., 2005; Zollers et al., 1999). In previous studies of attitude, many preservice teachers report feeling ill- prepared to serve students with disabilities in the general classroom setting (Barton, 1992; Houck & Rogers, 1994; Jobling & Moni, 2004; Kirk, 1998; McCray, 2004; McHatton & McCray, 2007). Some institutions of higher education are already addressing this need. For example, the University of Connecticut launched a five-year project beginning in 2003 to integrate National Association of Education for Young Children (NAEYC) and Council for Exceptional Children's (CEC) Division of Early Childhood standards in an integrated training and certification program. Their research

project aims to identify gaps in content knowledge, design a program to address these gaps, and inform policy (Bruder, Stayton, Mogro- Wilson, & Dietrich, n.d.). Westminster College in Pennsylvania is offering a dual certification in elementary education and special education; between 2000 and 2005, 10 colleges/ universities in Pennsylvania added elementary education and special education dual certification (Pennsylvania Department of Education, 2006).

There are many studies in which teacher attitudes towards inclusive environments are examined, but comparatively few have looked at the preservice teacher's perspective (Avramindis et al., 2000). Those that have surveyed this population show inconsistencies in teacher preparation programs and positive teacher attitudes (Curtis, 1985; Hudson & Glomb, 1997; D. Jobe et al., 1996; Jung, 2007; Nevin, Cohen, Salazar, & Marshall, 2007; Pearson, Lo, Chui, & Wong, 2003; Shippen et al., 2005; Silverman, 2007). These mixed results indicate a need for further research with preservice teacher attitudes. Knowing preservice teacher attitudes towards the inclusion of students with disabilities in the general classroom will pinpoint areas of needed reform for teacher preparation programs.

In this investigation, attitudes of preservice teachers towards inclusive environments are measured. Survey participants were invited from three institutions of

higher learning located in the southeastern United States. The purpose of this study is to identify present preservice teacher beliefs, attitudes, inclinations, and intentions towards the inclusion of students with disabilities in a predominately general education environment.

Knowing preservice teacher beliefs will assist colleges and universities in graduating students true to their mission: students who are sensitive to others in the community and have a strong sense of ethical values. With the help of a quality evaluation instrument, teacher education programs can improve by better meeting the needs of students. Teachers who have been trained to teach students with learning disabilities tend to express more favorable attitudes and emotional reactions to students with special educational needs who are included than those without training (Beh-Pajoo, 1992; Shimman, 1990). Knowing preservice teachers' entry-level beliefs toward inclusive environments will inform faculty of which attributes they should reinforce and which they should strive to alter (Brookhart & Freeman, 1992). Knowing how these attitudes differ from subgroup to subgroup (e.g. males v. females, elementary v. secondary) may assist schools of education on where and how to direct their attention.

This chapter will discuss the research problem while providing a background and context for why the study is needed and how it will contribute to the field. Research questions, subquestions, and hypotheses are delineated, and terms used within this document are defined. Next, assumptions, delimitations, and limitations are presented, followed by an overview of the subsequent chapters.

Statement of the Research Problem, Background, and Context

The goals of many institutions of higher education are similar. Mission statements from a handful of institutions in the south (Clemson University, 2008; College of Charleston, 2008; Converse College, 2008; Emory University, 2008; Mercer University, 2008; University of South Carolina, 2008; Winthrop University, 2008) include phrases such as *provide enrichment opportunities, create leaders, graduate individuals with judgment and taste, with the ability to think critically and creatively, foster the sensitivity for the problems of others and a strong sense of ethical principals, committed to the betterment of society*. In tune with these mission statement phrases is the belief that persons with disabilities have the right to participate in the mainstream of society. It is the philosophy of many students, parents, educators, and researchers that this participation applies to the classroom as well.

Kliewer (1998) offers insight into two views on the purpose of schooling. Some perceive education to be about membership and participation; each person creates his/ her own trajectory toward fulfillment or active membership (Kliewer, 1998). This educational membership correlates to one's societal membership outside the school walls. Both types of belonging require the need to work cooperatively, ask questions, know how to go about finding answers, and think critically. Others hold a more traditional picture of education, one in which the teacher delivers a set of predetermined skills to a group of children (Kliewer, 1998). Proponents of this school of thought generally support an educational experience in which the segregated student can practice skills apart from the group and use them within the community once the skills are mastered. The question then arises; can a student learn to be a citizen apart from the group? How can one learn to be a citizen apart from being recognized as a citizen (Kliewer, 1998)? How can one claim a culture without being a part of the culture (Kliewer, 1998)? Even though Kliewer formulates his argument well, he does not address the possibility that inclusion could be good for some children but not for all. The Council for Exceptional Children asserts its position that all children deserve different learning experiences because all children have different needs. All children are capable, but do not necessarily learn at the same rate

(Council for Exceptional Children, 2005). It is clear that “the term *inclusion* embodies a range of assumptions about the meaning and purpose of schools” (Avramindis et al., 2000).

Teachers have a great impact upon their students as well as the success of educational policies (Avramindis et al., 2000). For legislation to become real and meaningful, it must be embraced by those who are directly involved: the teachers (DeSimone & Parmar, 2006; Lambe & Bones, 2006; McHatton & McCray, 2007). Policies enacted to recommend the inclusion of students with disabilities are good-natured and well meaning, but without the support and commitment of teachers, legislative intent cannot be actualized.

Researchers have concluded positive teacher attitudes as one of the most important variables impacting the success of an inclusive educational program (Dedrick, Marfo, & Harris, 2007; D. Jobe, J. O. Rust, & J. Brissie, 1996; Kochhar, West, & Taymans, 2000; Larrivee & Cook, 1979; McCray, 2004; McHatton & McCray, 2007; Parish, Nunn, & Hattrop, 1982; M. Semmel, 1986; Villa et al., 1996); that is, an educational program in which children with disabilities are instructed in the general classroom along with their peers without disabilities. Negative teacher attitudes can affect

the expectancy and motivations of students as well as the teacher in the realization of his or her instructional skills (Kochhar et al., 2000; Skrtic, Sigler, & Lazar, 1973).

Historically, institutions of higher education that designate separate programs for teacher training in general education and special education have underprepared educators in both skills and expectations to work collaboratively in an inclusive environment (Avramindis et al., 2000; Blanton, Griffin, Winn, & Pugach, 1997; E. Bondy & Ross, 2005; Coates, 1989; Scruggs & Mastropieri, 1996; Villa et al., 1996). When educators are prepared to teach in an inclusive classroom, attitudes toward inclusion improve; when preservice teachers are not prepared for this instructional model, negative attitudes prevail (Dickens-Smith, 1995; Kochhar et al., 2000). Some teacher preparation programs have realized this fact and have begun pilot programs to alter their certification program to include a blended degree of general and special education (Bruder et al., n.d.; Pennsylvania Department of Education, 2006).

Teachers generally teach the way they believe is best. These beliefs or orientations to instruction are important to consider when teaching future educators because they determine which professional knowledge and pedagogical skills teachers will use in their own teaching (Brookhart & Freeman, 1992; Porter & Freeman, 1986). In

other words, teachers do not use instructed skills that are inconsistent with their beliefs. Changes in instruction are a result of changes in what teachers believe is best for their students (Brookhart & Freeman, 1992; Cuban, 1984; Silverman, 2007). Some researchers, e.g. (Fenstermacher, 1978; Kochhar et al., 2000; McHatton & McCray, 2007; Shade & Stewart, 2001; Shippen et al., 2005; Silverman, 2007), encourage school systems that wish to make changes in teaching practices to examine and consider teacher belief systems prior to making program or instructional changes.

The ideology of inclusion combines special and general education (Council for Exceptional Children, n.d.-a). If there is to be a merging of the general and special education worlds, the first step is to consider the current programs for preservice teacher training and the attitudes reflected in them (Kunzweiler, 1982). If institutions of higher learning aim to foster an inclusive mentality among their students, requiring a convergence of sensitivity, ethics, and activism for the betterment of society, it is necessary to examine teacher attitudes further.

Importance/ Significance of the Study

The literature on teacher attitudes to date expresses three limitations upon which this study can expand: It is most often limited to a single institutional context

(Brookhart & Freeman, 1992), the variety of scales used do not capture the multidimensional concept of attitude (Avramindis et al., 2000), and there is a dearth of theoretical support for the survey instruments used to measure teacher attitudes according to this researcher's review of the literature.

Roughly one-third (21) of the 68 attitude surveys consulted for this study were conducted at a single institution. This study aims to identify attitudes of preservice teachers at three universities located in the southeastern United States, thus the generalizability of such findings will be broader than the studies to date.

There exists a need to examine preservice teacher attitudes using a scale that addresses the multidimensional aspects of attitude. The literature demonstrates a variety of scale types, varying from 2 questions to 4 complete surveys in one package; however, few of them capture the concept of attitude in its many layers. The scale used in this study addresses preservice teacher attitude and intent in its many layers as detailed by the Theory of Planned Behavior (Ajzen, 1991; Ajzen & Driver, 1992; Ajzen & Fishbein, 1980). This theory posits that a person's intent to perform a particular task is dependent upon three components: 1) the person's favorability toward the behavior, 2) the amount

of social pressure the person feels to perform the behavior, and 3) the amount of control the person feels he/she has to perform or not perform the behavior (Francis et al., 2004).

The review of literature for this study revealed that approximately 12% of studies listed on inservice or preservice teacher attitudes have a scale that is grounded in theory. The instrument used in this study was developed using Ajzen & Fishbein's theory of planned behavior (1980), described above and further detailed in chapter three.

Contribution to the field of education and higher education will take place by expanding upon the limitations found in previous studies. This researcher hopes to identify present preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment by developing a study which takes place at multiple institutions, uses an instrument that explores the many layered aspects of attitude, and one which is grounded in theory.

The Research Question and Subquestions

Focus question

What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Subquestions

What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

Research Hypotheses

Focus question

What are preservice teacher beliefs, attitudes, inclinations, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Based on information obtained from previous research (Avramindis et al., 2000; Jobling & Moni, 2004; Shade & Stewart, 2001; Shippen et al., 2005; Silverman, 2007), the researcher hypothesizes that the attitudes and intentions of preservice teachers toward the inclusion of students with disabilities in a predominately general education environment will be positive.

Subquestions

What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

The researcher foresees positive attitudes from those who have had experiences, whether general or academic, with persons with disabilities and more negative attitudes from those who have had limited experiences (Avramindis & Norwich, 2002; Hanrahan & Rapagna, 1987a, 1987b).

How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

The researcher hypothesizes that elementary preservice teachers will have more positive attitudes than do secondary preservice teachers (McHatton & McCray, 2007; Scruggs & Mastropieri, 1996; T. V. Semmel, Abernathy, & Lesar, 1991). Based on prior research, the researcher also foresees the following to occur: special education majors will have more positive attitudes than general education majors (Barton, 1992; Scruggs & Mastropieri, 1996; T. V. Semmel et al., 1991), and females will have more positive attitudes than males (Avramindis & Norwich, 2002).

Definition of Terms

Inclusion

Inclusion refers to the educational model that includes students with disabilities in the school and classroom they would otherwise attend. Rather than pulling the child out of the general education classroom, support services are brought to the child (Council for Exceptional Children, 2005, n.d.-a). For this study, the term inclusive educational environment will refer to students with academic learning disabilities who receive academic benefit from the educational model. Consistent with the Council for Exceptional Children's position (Council for Exceptional Children, 2005), the researcher notes that the inclusive educational model is one of many options along the spectrum of services available to children with disabilities.

Attitude/ Belief

Attitude is a multidimensional concept. Statisticians, or those who use the term in the context of measurement, define attitude as one's disposition, thoughts, and/or feelings regarding a particular stimulus that is relatively stable in nature (Shultz & Whitney, 2005). A lexicographer would say attitude is a state of mind, a feeling (*The American*

Heritage Dictionary of the English Language, 1980). Philosophers refer to attitude as an inclination to believe (Ducasse, 1940). What then, is belief? It is a conviction or an opinion (*The American Heritage Dictionary of the English Language*, 1980).

Psychologists define attitude as a “predisposition to respond to some class of stimuli with certain classes of responses...”(Rosenberg & Hovland, 1960). It is this final definition of attitude that is used in this study.

Intention

Intention is defined as “a person’s motivation in the senses of his or her conscious plan to exert effort to carry out a behavior” (Francis et al., 2004). For this study, intent is the link between attitude and behavior.

Assumptions

This study was based on the following five assumptions. It was assumed that attitudes, beliefs, and intentions are measurable. It was assumed that attitudes of preservice teachers are reflective of teacher preparation programs (e.g. those preservice teachers who have had preparation for an inclusive environment will have positive attitudes toward inclusion). It was also assumed that the instrument used to measure attitudes, beliefs, and/or inclinations would accurately capture these characteristics. It

was also assumed that the participants of this study gave honest answers to the survey questions asked. Therefore, it was assumed that measurement of preservice teacher attitudes would improve our understanding of the current programs for teacher education and how they foster an inclusive mentality.

Delimitations and Limitations

Delimitations of the study include undergraduate students who are enrolled in their institution's School of Education. This group includes general and special education majors seeking elementary or secondary certification. Due to the geographic area of the study, the study was also delimited to colleges and universities in South Carolina.

Limitations to the study include the way in which the three schools surveyed organize their teacher education program. It is not possible for the researcher to control for what content each group of participants has had after a certain number of coursework hours. Another limitation was inherent to the study's design. A survey cannot completely capture the nature of someone's attitude, belief, or intention toward a particular idea. No attempt was made to interview survey participants by mail, phone, or person. Another limitation of this study is its basis on self-reporting of attitudes. Due to this procedure, it is difficult to ascertain how closely preservice teacher responses will correlate with actual

behavior (Reber, Marshak, & Glor-Scheib, 1995). Previous studies have indicated similar self reporting of attitudes toward inclusion correlated well with teacher behavior; 60% in the cited study indicated an exact match (L. S. Fuchs, Fuchs, & Stecker, 1989). Finally, this study was limited to three institutions of higher learning. Even though this participant base improves upon the present literature, it cannot be assumed to accurately represent the attitudes of preservice teachers in other geographic areas.

Overview of the Literature Review and Theoretical Constructs

The following chapter contains a discussion on theoretical constructs considered for basis of instrument development and/or selection, data analysis of findings, and discussion of results. Ajzen & Fishbein's theory of planned behavior (1980) is the theory which guides construct and instrument development. Following the theoretical discussion is a review of the literature on teacher and preservice teacher attitudes toward students with disabilities and inclusive education from 1960 to present. This decade range was chosen because it begins with publication of the seminal work by Dunn (1968), calling for a change in special education service delivery models. The review is organized by decade within the context of a discussion on how legislation provides a backdrop to attitudinal change and paradigm shifts. The researcher believes results of this study will

reflect another attitudinal shift in reaction to No Child Left Behind and the reauthorization of the Individuals with Disabilities Education Act in 2004.

Overview of Method

A web-based survey consisting of five constructs will be used to gather data concerning preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment. The constructs include 1) demographics, 2) behavioral beliefs, 3) normative beliefs, 4) control beliefs, and 5) generalized statements of intent toward inclusive educational environments. The survey instrument will be disseminated to students enrolled in a degree program seeking certification in elementary or secondary education at Clemson University, Coastal Carolina, and the College of Charleston.

Overview of the Complete Document

The next chapter will consider several theories for use as a basis of the theoretical framework. It will also provide the review of literature in the field of teacher and preservice teacher attitudes. Chapter three provides more detail on Ajzen and Fishbeins' theory of planned behavior (1980) and how this theory served as a basis for creation of

the survey instrument. Procedures and a preview of data analysis are also discussed in chapter three. Chapter four provides data analysis, and chapter five provides the discussion of results and summary of the project.

Chapter 2 The Literature Review

Introduction

Preceding the review of literature is a discussion on how the theoretical foundation for this study was selected. Four theories (situated cognition, Bandura's self-efficacy, schema theory, and the theory of planned behavior) were considered. The Theory of Planned Behavior (TPB) was chosen to guide instrument design, data analysis, and a discussion on preservice teacher beliefs, attitudes, and intentions toward an inclusive environment.

Teacher attitudes and legislative policy go hand in hand (Shade & Stewart, 2001). While policy affects the demands and/or requirements of education (in both k-12 and teacher training programs) thus affecting teacher attitudes, the teachers themselves play a part in creating policy change (Frawley, 2007; Goldstein et al., 2003; Moore, 2006; Smith, Heinecke, & Noble, 1999). This reciprocal relationship guides the organization of the literature review found in the second half of this chapter. The history of inservice and preservice teacher attitude instruments, studies, and outcomes is broken down into four categories: a) 1960s and 1970s, b) 1980s, c) 1990s, and d) 2000 and beyond.

Theoretical framework

A theoretical framework was necessary to provide the foundation for design of an instrument, provide a lens through which to analyze the data gathered from the administration of the survey instrument, and direct a discussion on the preservice teacher beliefs, attitudes, and intentions toward an inclusive environment. The following paragraphs detail theories that were considered and reasons for rejection or use as appropriate.

Situated Cognition

One of the theoretical constructs considered for this study was situated cognition. The theory of situated cognition, whose prominent theorists include C. Bereiter, A.L. Brown, J.G. Greeno, J. Lave, J.L Lemke, M. Scardamalia, and E. Wenger, is one in which *knowing* and *doing* are one. Proponents of situated cognition argue that “knowledge remains inert and unused if taught in contexts that separate knowing from doing” (Driscoll, 2005). Preservice teachers generally have little or no prior experience in the classroom. They have not had the opportunity to teach a heterogeneous group of students for whom differentiated instruction is necessary. Having this lack of experience makes preservice teachers impressionable. Instructors whom they encounter during their

undergraduate program along with experiences provided in their coursework have a strong influence on their attitude towards inclusive education. Even though this remains true, situated cognition was rejected for reasons detailed in the following paragraphs.

Proponents say that if knowledge is taught and not used in context that students do not remember how to use the knowledge later (Driscoll, 2005). Are attitude and knowledge the same? Does one need to work with a population directly to have a feeling about them? It is the researcher's belief that you can interact with leaders who project a particular bias, and if projected strongly enough, adopt that bias as your own. All this without ever having taught personally.

Situated cognition espouses the need for apprenticeship, or learning skills of a trade or interest. The researcher does not believe that one must participate in an apprenticeship to have a belief on a particular subject. For example, one can believe that auto mechanics is difficult without having ever attempted it oneself; rather, one knows it from impressions others have provided. Therefore, situated cognition doesn't work best as a theoretical lens for viewing preservice teacher attitudes.

Bandura

Albert Bandura is known for his theory on self-efficacy. There are four sources which affect a person's self efficacy beliefs: enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological states. Enactive mastery experiences are the learner's previous success at a task. This is said to be most influential because of its authenticity (Driscoll, 2005). Vicarious experiences are the role models. For this study, the role model could be the professor or class having an effect on a student's beliefs/ perceptions. It could also be a more personal influence in the life of the participant. Verbal persuasion is the means by which self- efficacy can be modified (Driscoll, 2005). They can be positive statements, rewards, etc. This can be observed in a classroom or other environment where attitudes and beliefs are molded, but cannot be easily measured on a survey instrument. Lastly, a physiological state is the gut feeling one gets that informs how one thinks he/ she will do on a task (Driscoll, 2005). Self-efficacy beliefs "are developed and strengthened by mastery experiences, social modeling, and persuasive forms of social influences" (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003). Self-efficacy, closely related to the concept of volition, or will, is a key component when considering the development of one's attitude (Huitt, 2006).

Schema Theory.

A schema is a data structure for representing the generic concepts stored in memory. These schemata provide the foundation for making inferences about events. (Driscoll, 2005). This notion of mental models assumes that people possess incorrect, incomplete, and idiosyncratic understandings that evolve with experience. New ideas and experiences continually modify the schemas, either by accretion (akin to fact learning), tuning (tweaking present ideas), or restructuring (changing the old idea to fit the new one). Attitudes, like these idiosyncratic understandings, are thought to be stabilized until a new concept emerges which causes a disruption in thinking. For this study, the new concept can be a classroom situation not yet considered or an aspect of disability not previously known. Once the participant encounters the new idea, his or her previous attitude must be adjusted to include the new information. This is an example of how schema theory focuses on process rather than product.

However, schema theory is intended as a learning theory rather than a theory through which one can examine attitudes, therefore this theory was rejected for the purposes of this project. A search of the terms *theory* and *attitude* led the researcher to the next theory in consideration.

The Theory of Planned Behavior

For this study, the theoretical framework should be one that considers the social aspect of attitude formation and makeup. Learning theories discussed previously examine the structure of how knowledge is stored in the brain, but one cannot assume that knowledge and attitude are comprised in the same way. Therefore, the researcher turned to social cognition for a more applicable theoretical framework. Social cognition is an approach to understanding social psychology that examines the processes underlying social phenomena (International Social Cognition Network, n.d.). Under the umbrella of social cognition is the theory which will guide this study, including instrument design, data analysis, and discussion. Icek Ajzen and Martin Fishbein were curious about the relationship, or discrepancy, between attitude and behavior (University of Twente, n.d.). The TPB suggests that a person's behavior is determined by his/ her intention to perform the behavior. While there are many theories on how beliefs play a role in a person's behavior, Ajzen theorizes that

“people can hold a great many beliefs about any given behavior, but they can attend to only a relatively small number at any given moment. It is these *salient*

beliefs that are considered to be the prevailing determinants of a person's intentions and actions. Three kinds of salient beliefs are distinguished: *behavioral beliefs* which are assumed to influence attitudes toward the behavior, *normative beliefs*, which constitute the underlying determinants of subjective norms, and *control beliefs* which provide the basis for perceptions of behavioral control" (Ajzen, 1991).

The TPB evolved from Fishbein and Ajzen's expectancy-value model of attitude (see (Fishbein & Ajzen, 1975)). In this model, Fishbein and Ajzen suggest that "attitudes develop reasonably from the beliefs people hold about the object of the attitude" (Ajzen, 1991). For example, I may hold positive attitudes about the holidays because I associate them with my experiences of enjoyable times with family, good food, and fun. When one considers the relationship between belief and behavior, "each belief links the behavior to a certain outcome, or to some other attribute such as the cost incurred by performing the behavior" (Ajzen, 1991). In the example of the holiday season, I am more likely to participate in holiday activities because of the positive value I have placed on my previous experiences.

Normative beliefs reflect a person's association between their belief and the likelihood that important people or groups will approve or disapprove of their performing a given behavior (Ajzen, 1991). These beliefs are often assessed by a global measure which asks participants to rate the extent to which "important others" would approve or disapprove of their performing a given behavior (Ajzen, 1991; Ajzen & Fishbein, 1980).

Perceived behavioral control (PBC) is the third component of the TPB. This component refers to a person's perception of their ability to perform a given behavior (University of Twente, n.d.). These control beliefs can be based on a number of factors, e.g. personal past experiences, past experiences of acquaintances and friends, second hand information about the behavior (Ajzen, 1991). The more resources a person perceives himself or herself to have, the lesser the possibility of a hindrance to performing the behavior, thus the greater the perceived behavioral control in a situation (Ajzen, 1991).

As a general rule, the more favorable the respondent's attitude on each of the three constructs (behavioral, normative, and control beliefs), the stronger the intention to perform a particular behavior (Ajzen & Driver, 1992). A model of how these components work together with intentions can be found in figure 2.1.

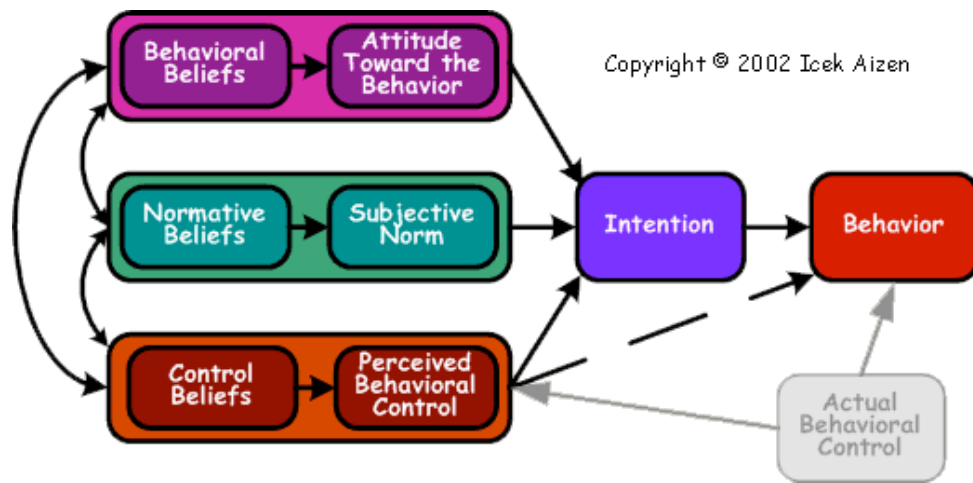


Figure 2.1. The theory of planned behavior (Ajzen, 1991).

Table 2.1. Theories considered to guide the research project

Conceptual Framework	Criterion 1: Can the framework provide a foundation for design or selection of an instrument?	Criterion 2: Can the framework provide a lens through which to analyze the data gathered from the administration of the survey instrument?	Criterion 3: Can the framework direct a discussion on the preservice teacher attitudes and intentions toward an inclusive environment?
Situated Cognition	Not in a context appropriate for this study.	Not in a context appropriate for this study.	Not in a context appropriate for this study.
Bandura's Self-Efficacy	Yes	Yes	This theory is a precursor to and is incorporated within the chosen theory.
Schema Theory	Not in a context appropriate for this study.	Not in a context appropriate for this study.	Not in a context appropriate for this study.
The Theory of Planned Behavior	Yes	Yes	Yes

The instrument for this study is divided into 5 constructs (demographics, behavioral beliefs, normative beliefs, control beliefs, and generalized statements of intent) based on Ajzen's TPB. The demographics component will gather information regarding the participants' background (e.g. gender, age, concentration of study); the behavioral beliefs section evaluates knowledge and beliefs relative to inclusion, the normative beliefs construct measures participant perceptions of social pressure, and the construct for control beliefs will measure the participant's perceived behavioral control

pertaining to the skills and activities assumed of the inclusion teacher. The final construct represents generalized statements about intentions regarding inclusive educational environments.

Inclusionary and Exclusionary Criteria

In order to gain insight on the variety of existing instruments for measuring attitudes, studies of both inservice and preservice teacher attitudes were included in this review. The researcher used articles beginning in the late 1960s. Reasoning for this decision was based on the publication date of Dunn's classic 1968 article on the need for change in the field of special education. This piece is regarded as a seminal work (Patton, Polloway, & Epstein, 1989), and it is the most cited article in special education literature (McClesky, 2007; Swanson, Hughes, & Nicholes, 1988). Articles in this review were also required to include special education as a topic of attitudinal study. Research that surveyed teachers but did not focus on students with special needs were not included in the literature review. Another criterion for inclusion in this literature review was that the publication had to include an instrument for data collection. Some points of discussion come from qualitative research; however, quantitative and mixed methods studies make up the bulk of studies considered. Each piece was analyzed for constructs, theoretical

basis/ grounding, participants, location, disabilities included, and method/ instrument used. The researcher did not include articles that were opinion pieces or editorials to a journal. Also, articles in journals or magazines that are not peer reviewed were excluded from the review of literature. The exception to this rule was the occasional ERIC document or conference paper, which provided examples of attitude scales and constructs.

Literature Search

Searches of online databases, e.g. ERIC, PsycINFO, Psychological Abstracts, Current Index to Journals in Education, and Exceptional Child Education Resources were performed with various combinations of the following search terms: special education, teacher education, preservice, teacher education program, disab*, general classroom, regular classroom, inclusion, integration, attitude, perception, belief, survey, educational policy, legislation, desegregation, behavior, and classroom management.

An ancestral and descendant search was completed for all applicable articles, and finally, a hand search was performed using the following journals: Teacher Education and Special Education, Journal of Learning Disabilities, Remedial and Special Education, and Exceptional Children. Choice for the hand search was based on those journals that

frequently publish survey based descriptive research studies. Hand searches were limited to publications between 1997 and 2008 due to the changes in IDEA in 1997 that precipitated more emphasis on inclusion and the need for educators who are better prepared for this type of educational environment.

History of teacher attitudes towards inclusion

1960s and 1970s

As early as the 1960s, literature has indicated that academic, behavioral, and social performance of students with mild disabilities is higher in the general classroom when compared to a special classroom placement. These studies, which are largely empirical in nature, illustrate the beginning of an attitudinal paradigm shift. For example, the use of labels to identify children with disabilities was found to have a negative impact on teachers' attitudes of those children, regardless of the educators' experience level (Combs & Harper, 1967). One author even implies that the teachers' experience level can cause more negative attitudes towards exceptional children (Major, 1961). During the 1960s, children with disabilities were often segregated; they were instructed in separate, self-contained facilities. Much of the literature in the final years of this decade focuses on

the marginalization of this group of students, which consists of approximately 60-80 percent children from low socio-economic status backgrounds (Dunn, 1968). There is a stated desire to improve the learning situation for students with disabilities (Dunn, 1968; Gickling & Theobald, 1975). These expressed desires become a catalyst for the mainstreaming movement, which would take off within the following decade.

Many legislative changes took place during the 1970s that had a profound effect on the education of students with disabilities. The Education of the Handicapped Act of 1970 exclusively addressed students with disabilities. It focused on higher education programs and provided funding in the form of grants to teacher training programs for teaching children with disabilities. Section 504 (1973), recognized under the same name today, prohibits discrimination of persons with disabilities in any program receiving federal money. It also requires the education of students with disabilities to be comparable to that of students without disabilities. Education for all Handicapped Children Act, EAHCA, (1975), otherwise known as PL 94-142, reflects the most significant increase in the role of the federal government in special education to date (Katsiyannis, Yell, & Bradley, 2001). The EAHCA granted a free, appropriate, public education (FAPE) to every student who qualifies for special education, also known as the

Zero Reject Principle. With this legislation, the federal government required students with disabilities to be educated with their non-disabled peers to the maximum extent appropriate while still receiving educational benefit. The least restrictive environment (LRE) is to be considered in every placement decision. The term *LRE* eventually evolved into *mainstreaming*. Typically, mainstreaming in this sense meant including students with disabilities with their peers without disabilities for the nonacademic portion of the school day (Bateman & Bateman, 2002). Literature on teacher attitudes published during the 1970s era indicates continued caution towards instruction of students with disabilities, though one study found that students with disabilities can make as much or more progress in the general classroom when compared to special classroom placement if special education instructional techniques are used (Bradfield, Brown, Kaplan, Rickert, & Stannard, 1973). Also, survey results showed that staff members who are most distant from the students (e.g. district office administrators, professors and researchers in higher education) demonstrate mostly positive attitudes toward mainstreaming while those who are closest to the students (e.g. teachers) have a higher incidence of negative attitudes (Barngrover, 1971; Gickling & Theobald, 1975; Larrivee & Cook, 1979). Some studies found that teachers held negative attitudes toward the ideas of both students with

disabilities and the concept of inclusive education (Lundstrom, 1979). A study of preservice teacher attitudes in the late 1970s measured instructional method as compared to attitude and found a reciprocal relationship: as time in lecture increased, favorable attitudes toward inclusion decreased (Orlansky, 1979).

During these years researchers and commentators on special education show a strong desire to improve the learning situation for students with disabilities. However, attitude studies show teachers remain cautious and negative toward students with disabilities, especially in an instructional setting.

1980s

A notable beginning to the eighties era is the landmark court case Board of Education of the Hendrick Hudson Central School District v. Rowley (1982). This case investigated allegations that the district did not provide enough support for a student with a hearing disability. The court determined that while access to curriculum should be granted, progress could not be guaranteed. The definition of a free, appropriate public education (FAPE) was modified to include educational benefit; the law does not mandate maximizing the potential of each child. The Regular Education Initiative (REI), a term coined by Madeleine Will (M. Will, 1986), was a movement which came about in the

mid-80s that gave more responsibility to the general education teacher (Villa et al., 1996).

The REI was a result of the advocacy of students with disabilities by parents and teachers who felt that mainstreaming “provided far too little and came far too late” (Turnbull, Turnbull, Shank, & Leal, 1999). Students with disabilities still received special services, but the REI gave some ownership in the child’s education back to the general educator.

Proponents of REI viewed the pull out system of special education as a failure (Stainback & Stainback, 1991), and they felt that all children should be educated in the general education classroom (Snell, 1991). Out of the REI, a new term, *inclusion*, began to evolve (Turnbull et al., 1999). The term, inclusion, implies that a child will be taught outside of the general education classroom only when all efforts to meet his/her particular learning needs have been attempted and failed. Pulling a student out of the general education room to receive special education services is viewed as a temporary placement with the goal of reintegration as soon as possible (Bateman & Bateman, 2002). At the point of implementation of the regular education initiative (REI), teacher attitudes reflected a pathognomonic perspective, one which assumes the disability is inherent in the individual student (Avramindis et al., 2000; Jordan, Lindsay, & Stanovich, 1997).

This perspective is in opposition to interventionist perspective, which attributes

difficulties to the interaction between the student and his/ her environment (Avramindis et al., 2000; Jordan et al., 1997). Survey results indicated resistance to an inclusive environment; teachers were not only in support of a pull out program, they wanted it extended (Coates, 1989; T. V. Semmel et al., 1991).

Many variables were considered for their influence on teacher attitudes during the 1980s. As one might suspect, a relationship exists between special education training and attitude toward mainstreaming; teachers who have had special education training are more likely to be favorably disposed to accepting students with disabilities in their classroom with no willingness differences in grade level (Hanrahan & Rapagna, 1987a, 1987b). Later research qualified this finding, ranking professional training less influential than the functional characteristics of the disability under consideration (J. Ward, Center, & Bochner, 1994). Students with disabilities continue to be subject to stereotypes in the 1980s era, as indicated by attitudinal survey data from the time (e.g. replications of Yuker *et al.*'s Attitudes Toward Disabled Persons Scale (Altman, 1981)). Previous attitudinal surveys, i.e. those in the late 1970s and early 1980s, utilized traditional disability categories (Larrivee, 1982). The shift from disability categories to functional

characteristics was justified because it would produce data that “would be more relevant to educational decision making and policy formulation” (James Ward & Le Dean, 1996).

Center, Ward, and their colleagues conducted a series of attitudinal surveys throughout the 1980s that used a Likert scale. They used a variety of participants, (e.g. general education and resource teachers, school principals, school psychologists) to determine attitude toward mainstreaming. A later report by these authors summarizes these studies, noting professional groups vary in which sort of student they feel is more likely to succeed in the general classroom (J. Ward et al., 1994). Coates (1989) surveyed 94 general education teachers in northwest Iowa, asking them to rate their agreement to a series of statements on the Regular Education Initiative. They found that general education teachers disagree with the basic tenets of the REI. For example, they believed the resource room to be effective for students with disabilities. General educator response to REI legislation reveals a support of pull out programs and a call for their expansion to include students who are not identified as needing special services (Coates, 1989).

Attitude trends from the previous decades extend into the 1980's. Teachers continue to be cautious and/ or negative with considering students with disabilities included with their non-disabled peers in an instructional setting.

1990s

Two separate but equally important legislative actions occurred in 1990. The Americans with Disabilities Act (ADA) prohibited the discrimination of persons with disabilities in private/ public employment, accommodations, state/local services, transportation, and telecommunications ("Americans with Disabilities Act," 1990). The Individuals with Disabilities Education Act (IDEA, 1990), a reauthorization of PL 94-142, dropped the term *handicapped* and changed the name of the law to IDEA. Two categories of disability, autism and traumatic brain injury, were added to the previous list, and transition services at age 16 were added to the IEP. IDEA consists of four parts, A through D, each addressing different components of the law. The term *mainstreaming* continues its evolution into *inclusion* as the new buzz word during this era (Monahan, Marino, & Miller, 1996). Students with special needs are to be provided with a spectrum of services at the site they would normally attend if they did not have special needs and this provision must take place in the least restrictive environment. Many researchers began to direct their efforts toward inclusion programming (Lilly, 1988; Stainback & Stainback, 1991; Wang & Walberg, 1988; M. C. Will, 1986). Literature of the time indicates the view of inclusion as being a merger of special education and general

education, though the mindset continues to be more integrated than inclusive (Houck & Rogers, 1994; Monahan et al., 1996). Attitudinal research indicates a preference for a spectrum of services depending on the needs of the individual child (Andrews & Clementson, 1997). One study compares data from the 1990s to previous research in the 1980s and indicates that attitudes toward students with disabilities in an integrated setting in the 1990s are more positive, especially if the setting is collaborative (Harvey, 1990; Minke, Bear, Deemer, & Griffin, 1996; Phillips, Sapona, & Lubic, 1995; Villa et al., 1996). Barton (1992) studied 31 teachers in the Chicago area. She found that general educators were anxious about their abilities for teaching in a mainstreamed classroom and wanted assistance from the special education teacher. It is speculated that this is due to the no-choice policy of legislative mandates. Teacher concerns from this decade include preparedness to teach students with disabilities (Barton, 1992; Houck & Rogers, 1994), time to sufficiently teach a heterogeneous group of students with disabilities and students without disabilities (Barton, 1992; T. V. Semmel et al., 1991), and resources and support personnel (Janney, Snell, Beers, & Raynes, 1995; Minke et al., 1996). Teachers who reported low efficacy scores or had little experience in the field of teaching were less receptive to an inclusive educational model (Soodak, Podell, & Lehman, 1998).

2000

No Child Left Behind (2001), known as NCLB, came about in reaction to the low academic achievement in America's schools (Yell et al., 2005). Federal funding and incentives are given to schools that achieve goals. Basic tenants of NCLB include: 1) Adequate Yearly Progress (AYP), 2) highly qualified teachers, and 3) scientifically based instruction. NCLB maintains that all students will reach proficiency or better in reading and math by the year 2013-2014. Also, before the year 2005-2006, all content area teachers in Title I schools were required to have highly qualified status. This poses a problem for teachers in the field of special education due to the number of content areas in which students with disabilities are taught, often by one teacher (McLeskey & Ross, 2004).

IDEA, reauthorized in 2004, focused on aligning the legislation with NCLB. Fifteen states are piloting a program that will increase instructional time, streamline state and local requirements, and hopefully improve results for children (Federal Grants, 2008).

One adjustment made in the IDEA legislation is the way in which students with learning disabilities are identified. Previously, districts used a discrepancy formula to

determine eligibility for services. They now have the option to use the response to intervention (RTI) model, a three-tiered approach using data to identify students needing more academic support. In the RTI model, students who are not responding to instructional intervention are provided with increasing support services (Council for Exceptional Children, n.d.-b). Referral to special education is the final tier considered. In this model, students get necessary assistance faster without having to “wait to fail” in order to be provided with research based interventions (Lillenstein, 2006). It is clear that the role of the general education teacher is expanding as the RTI model becomes more prevalent and widespread. Now, more than ever before, knowledge, understanding, and positive attitudes of the general education teacher will help him/her to be confident and effective when working with students who have disabilities (Berry, 2008).

Teacher attitudes from 2000 to present reflect concerns over recent legislation. Opinion pieces of in the early years of the decade even note that general educators feel intruded upon and more troubled than ever (Berliner, 2002; Cochran-Smith, 2003). However, Romi & Leyser (2006) found that preservice teachers in special education had higher self-efficacy and therefore responded more favorably to inclusion than did general education preservice teachers. In contrast, the study by Shippen et al. (2005)

demonstrates how future general educators felt more anxieties about including students with disabilities in the general education classroom compared to the anxieties of future special educators. Shippen and colleagues (Shippen et al., 2005) found providing these teacher candidates with information on inclusive practices had a calming effect. Another report of preservice teacher efficacy for teaching in an inclusive setting found that teacher candidates had low confidence in their abilities; preservice teachers reported concerns about collegial support as well (Silverman, 2007). Romi & Leyser (2006) found that Israeli preservice teachers expressed strong support for the philosophy of inclusion (referred to as integration in their study), but they also had concerns about ability to teach students with disabilities. Lambe & Bones (2006) had similar findings. They surveyed 41 university students in Ireland and discovered that these students were generally positive, though not “evangelical in their beliefs;” they understood the difficulties and challenges of an inclusion program. Alghazo, Dodeen, and Algaryouti conducted a study of 597 Arab preservice teachers in Jordan. They found no significant differences between male and female respondents in their attitude toward inclusion (Alghazo et al., 2003). Tait and Purdie (2000) studied 1,626 preservice teachers in Australia and found that females are more likely than males to have sympathies toward students with disabilities. Though the

question of gender differences in inclusion beliefs is inconsistent in the research, many studies from the 2000s suggest that attitudes toward inclusion remain cautious. Van Reusen and colleagues surveyed 125 high school teachers in San Antonio, TX and found that over half (54%) held negative attitudes toward inclusion. These teachers provided responses reflecting the belief that students with disabilities would negatively impact the learning environment, thus the educational benefit to the students without disabilities (Van Reusen, Shoho, & Barker, 2000). Secondary special education teachers report dissatisfaction with the training provided by their undergraduate program in regard to preparing them for becoming a secondary special education teacher (Bouck, 2005; McCray, 2004). This same study goes on to illustrate how teacher preparedness and job satisfaction are strongly related. This preparation matters not only for attracting teachers to the field of special education but retaining them as well (Bouck, 2005).

As policy continues to shape our classrooms and the requirements within, educators need to call for more research of how teachers are instructed so there will be research- based evidence to inform these policy decisions (McHatton & McCray, 2007; McLeskey & Ross, 2004). Knowing and understanding preservice teacher attitudes toward inclusive environments will begin this discussion on higher education teacher

certification programs. Knowledge of the kind of teacher our institutions of higher education are producing will show institutions of higher education where to begin in their quest to fulfill their mission statements and prepare teachers for an ever-changing classroom setting.

Conclusion

From the 1950s onward, many changes have been made that both directly and indirectly affected the education of students with disabilities. PL 94-142 has undergone positive changes through IDEA in 1990 and its reauthorization with amendments in 1997 and 2004. These legislative changes in concert with NCLB continue to work towards closing the achievement gap and providing an equitable education for all students. However, legislative mandates alone cannot engender a genuine inclusion experience for students with disabilities (Reber et al., 1995). One of the most important predictors of successful inclusion program is the attitude of the teachers involved (Alghazo, Dodeeen, & Algaryouti, 2003; Coates, 1989). Because the type of academic preparation impacts the attitudes of preservice teachers (Avramindis & Norwich, 2002; Beh-Pajoooh, 1992; Reber et al., 1995), there is a need for teacher training programs to emphasize the development of positive attitudes toward the education of students with disabilities along with

development of student knowledge on topics found to be of most concern to preservice teachers (Fisher, Frey, & Thousand, 2003; Peterson & Beloin, 1998; Reber et al., 1995).

Before institutions of higher education can design a curriculum intended to improve attitudes, there needs to be more sufficient information about the attitudes of preservice teachers (Reber et al., 1995; Silverman, 2007).

Chapter 3 Method

Introduction

Beginning the discussion on method is the theoretical framework. Several theories were considered to serve as a lens through which to determine the instrument, analyze data, and guide the discussion of results. Ajzen and Fishbein's Theory of Planned Behavior provide the framework for this study. Following the theoretical discussion are sections detailing instrumentation, hypothesis, research paradigm, and a description of the project.

Theoretical Framework

Ajzen and Fishbein's Theory of Planned Behavior will guide instrument development, data analysis, and the discussion on preservice teacher attitudes toward an inclusive environment. This theory is based on the premise that human behavior is guided by three considerations: a) beliefs about outcomes of the behavior (behavioral beliefs), b) beliefs about the normative expectations of others and motivation to fulfill these expectations (normative beliefs), and c) beliefs about the presence of factors that may facilitate or impede performance of the behavior and one's perception of his/her power in

these factors (control beliefs) (Ajzen, 2006). If one has a positive attitude toward a behavior and believes that people who are important to them would approve of the behavior, they are more likely to perform the behavior (i.e. their motivation or intention is increased) (Ajzen & Fishbein, 1980). This theory incorporates the additional concept of perceived behavioral control, originating from Bandura's theory of self-efficacy (Bandura, 1977). Perceived behavioral control states that even more important than the actual control of the behavior is the perception that one has control and the effect that perception has on intentions and actions (Ajzen, 1991). This is not to be confused with Rotter's concept of perceived locus of control (Rotter, 1966). Perceived behavioral control refers to "people's perception of the ease or difficulty of performing the behavior of interest" (Ajzen, 1991). This perceived control can vary across situations and actions whereas the locus of control remains stable across both.

The role of beliefs is central to the Theory of Planned Behavior. The researcher can theoretically gain insight into the reasons why people hold certain attitudes, subjective norms, and perceptions of behavioral control by measuring participant beliefs. The TPB is the basis for the survey instrument created for this study. There are four constructs within the instrument: a) behavioral beliefs (attitude toward the behavior), b)

normative beliefs (subjective norm), c) control beliefs (perceived behavioral control), and d) generalized statements of intent. Demographic data is collected as a fifth construct but only as a means for providing background information on the participants.

Research questions and hypotheses

Focus question

What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Based on information obtained from previous research (Avramindis et al., 2000; Jobling & Moni, 2004; Shade & Stewart, 2001; Shippen et al., 2005; Silverman, 2007), the researcher hypothesizes that the attitude toward the inclusion of students with disabilities in a predominately general education environment will be positive.

Subquestions

What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

The researcher foresees positive attitudes toward persons with disabilities from study participants who have had more hours of coursework, and more negative attitudes

from those who have had limited coursework experiences (Avramindis & Norwich, 2002; Hanrahan & Rapagna, 1987a, 1987b).

How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

The researcher hypothesizes that elementary preservice teachers will have more positive attitudes than do secondary preservice teachers (McHatton & McCray, 2007; Scruggs & Mastropieri, 1996; T. V. Semmel et al., 1991). Based on prior research, the researcher also foresees the following to occur: special education majors will have more positive attitudes than general education majors (Barton, 1992; Scruggs & Mastropieri, 1996; T. V. Semmel et al., 1991), and females will have more positive attitudes than males (Avramindis & Norwich, 2002).

Instrumentation

Need for new scale

There are a multitude of studies done in the last 50 years on the attitudes of teachers toward students with disabilities and, more specifically, toward inclusive education. The number of studies on preservice teacher attitudes is much lower (30% of

all studies reviewed, 15% occurring in the last ten years), but has seen growth in the past two decades (McLeskey, Henry, & Hodges, 1998; Stanovich & Jordan, 1998). In this bulk of literature (Andrews & Clementson, 1997; Avramindis et al., 2000; Avramindis & Kalyva, 2007; Hastings & Oakford, 2003; Jung, 2007; Lambe & Bones, 2006; Lancaster & Bain, 2007; Mintz, 2001; Nevin et al., 2007; Romi & Leyser, 2006; Shippen et al., 2005; Silverman, 2007), there exist original scales and scales other studies have created; however, few capture the multidimensional nature of attitude.

Scale development

Scale development began with a search for studies which targeted both preservice and inservice teachers' attitudes. The researcher aimed to find trends in attitude survey construction. Searches of online databases, e.g. ERIC, PsycINFO, Psychological Abstracts, Current Index to Journals in Education, and Exceptional Child Education Resources, were performed with various combinations of the following search terms: special education, teacher education, preservice, teacher education program, disab*, general classroom, regular classroom, inclusion, integration, attitude, perception, belief, survey, educational policy, legislation, desegregation, behavior, and classroom management.

Ancestral and descendant searches were completed for all applicable articles, and finally, a hand search was performed using the following journals: Teacher Education and Special Education, Journal of Learning Disabilities, Remedial and Special Education, and Exceptional Children. Choice for the hand search was based on those journals that frequently published survey based descriptive research studies. Hand searches were limited to publications between 1997 and 2008 due to the changes in IDEA in 1997 that precipitated more emphasis on inclusion and the need for educators who are better prepared for this type of educational environment. In this study of trends in attitude survey construction, the researcher found no surveys in the field of education, specifically attitudes toward inclusive educational settings, which use the TPB as a foundation. Using a guide provided by Ajzen on his university website (<http://people.umass.edu/ajzen/>) and themes found within the literature, the researcher created a survey which examines pVCreservice teacher attitudes and beliefs toward an inclusive educational environment based on the TPB (Ajzen, 2006; Francis et al., 2004).

Construct outline

See appendix C for construct overview

The survey instrument is divided into four constructs: behavioral beliefs, normative beliefs, control beliefs, and generalized statements of intent. Each of the behavioral, normative, and control beliefs constructs are then divided into three sections: two are indirect belief measures, and one consists of items that directly measure the category of belief (see Appendix C for construct outline).

The items that directly measure the behavioral belief ask about the participants' overall attitude according to each construct. For example, item seventeen measures the respondent's behavioral belief with the statement, "Overall, I think inclusive educational environments are... harmful (1)/ beneficial (5)." Item twenty-nine directly measures the respondent's overall normative belief by stating, "People who are important to me think inclusive educational environments are beneficial for students with academic learning disabilities... strongly disagree (1)/ strongly agree (5)." Item thirty-three directly measures the participant's perceived behavioral control with the statement, "I will have the resources needed to use/ implement progress monitoring in my classroom... unlikely (1)/ likely (5)."

The two sections of indirect measures are designed to work together according to the overall construct being measured. The subcategories indirectly measuring behavioral

beliefs consist of items that address participant beliefs about the consequences of the behavior, and the other addresses the corresponding positive or negative judgments related to each behavioral consequence. For example, item three states, “Inclusive educational environments are beneficial for students with academic learning disabilities;” participants rank their answer from strongly disagree (1) to strongly agree (5). This behavioral consequence is paired with item nine which states, “Doing something beneficial for students with academic learning disabilities is... extremely undesirable (-2)/ extremely desirable (+2).” The later statement represents a judgment or outcome evaluation of the corresponding behavioral belief.

The subcategories measuring normative beliefs contain statements about how individuals important to the participant would like them to behave, and the corresponding items include positive or negative judgments about each normative belief. For example, item thirteen states, "Teachers in the field think schools should use inclusive educational settings as an option for students with academic learning disabilities,” and participants rank their answer from strongly agree (1) to strongly disagree (5). The corresponding item measures the participant’s motivation to comply with the normative belief. For

example, item twenty-one states “Doing what other teachers do is important to me,” and participants rank their agreement on a continuum from not at all (-2) to extremely (+2).

The subcategories indirectly measuring the participant’s perceived behavioral control determine how much control a person has over the behavior and the likelihood of the individual to perform or not perform the behavior. For example, items five and twenty-five address progress monitoring. Item five states, “Progress monitoring is an accurate means of gathering information on student learning,” and the participant ranks their response on a continuum from unlikely (1) to likely (5). Item twenty-five addresses the power of this control belief to influence the performance of the behavior. It states, “I am likely to use progress monitoring in my classroom,” and the participant chooses his/her response on a scale from strongly agree (-2) to strongly disagree (+2). This particular item required reverse coding in the data analysis.

Francis et al. (2004) note that survey instruments based on the TPB consist of psychological or internal constructs (with the exception of the behavioral construct). Alone, direct and indirect measures make different assumptions about the predictor variables. By using both measures within the same construct, the researcher is able to

gain a more informed perspective of each belief category. Scores between the directly and indirectly measured subcategories are expected to be positively correlated.

Design

A survey represents an aggregate group of decisions, which “fit together and support one another in a way that encourages most people to respond and minimizes inaccurate or inadequate answers” (Dillman, 2000). Survey development involved studying previous instruments and designing the Theory of Planned Behavior for Inclusion (TPBI) scale in order to encourage a high response rate while maintaining high validity and reliability of results. The full survey can be viewed in Appendix D. A problem that is consistent among survey research is the low rate of return (Brookhart & Freeman, 1992; Dillman, 2000). Survey administrations in this study took place via an emailed link. Return rates on emailed surveys can range from a low 10% to a high 90% depending on a variety of factors, e.g. length of survey, attractiveness, perceived importance of the subject (Dillman, 2000). Because repeated contacts are key to maximizing the response rate of emailed surveys (Dillman, 2000), reminders were used to improve the rate of response for this survey administration; however, no more than three reminders were sent to potential participants. Use of a respondent- friendly

questionnaire that is clear and easy to comprehend was another tactic used to encourage a high rate of response. Given these efforts, return rates were expected to be moderate to high.

Validity

Because respondents are answering questions about themselves, it is believed that they will take the questions seriously and consider each question carefully. High interest levels such as this are inferred to be the reason for results found in previous studies (Brookhart & Freeman, 1992). If results from this study remain consistent with prior research, stability and construct validity of the study will likely be enhanced. In order to ensure validity of results, attention was given to the following details regarding survey questions: clear language, concise statements, unbiased statements, and relevant content. Content area experts were utilized to check the survey items before administration of the instrument to ensure content validity. Concurrent validity will be established via a comparison of this study's results with the literature base.

Reliability

In the pilot administration of the survey, a Cronbach's alpha score was determined for each item and each construct (Cronbach, 1951). If the alpha coefficient

for the construct was lower if the item was deleted, the item was then either adjusted according to wording or content or it was deleted. This decision was based on the size of the alpha coefficient.

Procedures

After development of the initial survey, content area experts were consulted to check the instrument to make sure items were not offensive or degrading to any group, did not include or imply stereotypic depiction of any group, did not include clues or information that could be seen to work to the benefit or detriment of any group, and did not contain any group-specific language or vocabulary (e.g., culture-related expressions, slang, or expressions that may be unfamiliar to examinees of either sex or of a particular age.)

Permission to conduct research was obtained from the Institutional Review Board to conduct the study before any further action was taken. Once proper permission was granted, a pilot study of the survey instrument was conducted. The pilot study took place at two schools of higher education in Pennsylvania. A gatekeeper provided ease of access to survey participants; this convenience sample of students included those enrolled in education courses selected by the gatekeeper. Once the link was disseminated, a two-

week window was provided to allow time for participants to voluntarily respond. After two weeks passed, 43 total responses had been collected. Of these 43, seven were unusable due to incomplete responses. Three of the surveys had partial data missing (e.g. one or two items were not answered), and a mean substitution technique was utilized before analyzing the data (Buhi & Goodson, 2008). The pilot study was done in order to accomplish two goals: (1) Determine whether the survey items directly measuring attitude or intention yield a high reliability using the Cronbach's alpha, and (2) Determine the need to reword or rephrase items based on the reliability scores. Pilot data provided useful information regarding the survey in its initial form. Items in the normative and PBC constructs were low in reliability (see Table 4.1), and thus questions in these constructs were reworded or rephrased.

The researcher chose three universities in South Carolina using a combination of convenience and purposeful sampling techniques. Clemson University, Coastal Carolina, and the College of Charleston are all state supported schools in different geographic areas of the state. They are also schools at which the researcher has ties to a gatekeeper who was able disseminate the link to the survey instrument. The researcher contacted the gatekeepers and provided a summary of the proposed study, a hard copy of

the survey instrument, and the informed consent form. Surveys were web-based using www.surveymonkey.com, and the link was emailed to a contact at each institution. The survey was then distributed via email link to students enrolled in a degree program seeking teacher certification.

Because the curricular programs differ at each school site, random sampling was the best way for gaining a normal distribution of each age demographic. This sampling procedure allowed all students within the school of education at each site an equal chance of being included in the pool of participants.

A window of three weeks was provided for surveys to be completed. A reminder email was sent after each week passed to maximize the rate of return. At the end of the collection period, results were gathered and downloaded for analysis.

Data Analysis

Data analysis procedures are described below for the survey itself, the focus question, and each of the subquestions.

Direct measures

Direct measures of attitude attempt to gain an overall perspective of a participant's

belief in each construct. Procedures for analyzing these items are detailed in this section.

First, survey items were recoded to ensure negatively phrased statements were unidirectional; i.e. higher numbers on the items should reflect a positive attitude toward the target behavior. Next, item analysis was conducted using Cronbach's alpha to determine internal consistency, with a goal of 0.6 for each co-efficient (Cronbach, 1951; Francis et al., 2004). For all direct measures of attitude (behavioral belief, normative belief, and perceived behavioral control), means for each construct were calculated to determine a construct score. The construct score was then used to decide if beliefs were negative, positive, or neutral. Correlations between intention and the direct measures were then calculated using multiple regression procedures. Francis et al. (2004) explains "although there is not a perfect relationship between behavioral intention and actual behavior, intention can be used as a proximal measure of behavior." Correlations were performed in order to verify consistency among construct responses and to find out if responses to the direct measures are predictive of behavioral intentions.

Indirect measures

Items that indirectly measure behavioral, normative, and perceived behavioral control beliefs are two fold; corresponding questions work together to determine how

judgments of the belief (whether from the participant, important individuals in the participant's life, or the participant's perception of the skills needed or resources available) facilitate the behavior. Each indirect measure of belief was weighted using the formula below to create a new variable total representing the weighted score for each belief. The response in one construct was multiplied by the response in its corresponding construct. Products were summed across the construct to create an overall construct attitude score for each participant. Total attitudinal mean values were then calculated for each construct (not including items measuring demographics or intent) to provide the overall perspective for all participants. The possible range of scores is -40 to +40 for each construct. A score of zero is considered neutral.

$$A = (a \times e) + (b \times f) + (c \times g) + (d \times h)$$

Where A = total attitude score

a, b, c, and d are scores for each of 4 behavioral (or normative, or PBC) beliefs

e, f, g, and h are scores for outcome evaluations (or motivation to comply, or power to influence) relating to each previous belief.

Bivariate correlations were computed between direct and indirect measures of the same construct to confirm validity of the indirect measures. Then, a multiple regression procedure was used between direct and indirect scores (e.g. the directly measured attitude scores and the sum of the weighted behavioral beliefs) to determine a relationship between the paired measures.

Focus question

What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Mean scores for each direct measure of attitude in each construct were used to determine if general beliefs were positive, negative, or neutral. Though the survey instrument has not been used previously in this form, the researcher was able to consider the range of the Likert scale choices to make this determination.

In order to determine if general attitudes measured were indicative of intent, a multiple regression procedure was used with intention as the dependent variable and the direct measures of attitude, subjective norm, and perceived behavioral control as the predictor variables.

For indirect measures of attitude (e.g. behavioral belief and outcome evaluation; normative belief and motivation to comply), each belief was weighted using multiplication to create a new variable total representative of each belief. Bivariate correlations between the direct and indirect measures of the same construct were found to confirm the validity of indirect measures. In order to determine if indirect measures were indicative of intent, a multiple regression procedure was used. Directly measured attitude scores were the dependent variable, and the sum of the weighted behavioral beliefs were used as predictor variables. This same approach was used for the two remaining constructs: subjective norms and perceived behavioral control.

Subquestions

What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

A one-way multivariate analysis of variance (MANOVA) was performed using class status as the independent variable (freshman, sophomore, junior, senior), and the seven attitude scores (the directly measured behavioral, normative, PBC, and intent, and the indirectly measured behavioral, normative and PBC) as the dependent variable. If the overall F test is significant, univariate analyses of variance (ANOVA) will be conducted

to test the significance of each construct mean. If significant, post hoc tests will be performed to determine the significance of class status with respect to the dependent measures. The same procedures were used with student teaching as an independent variable.

How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

A one-way multivariate analysis of variance (MANOVA) was performed using certification as the independent variable (early childhood, elementary, secondary, special, other), and the seven attitude scores (the directly measured behavioral, normative, PBC, and intent, and the indirectly measured behavioral, normative and PBC) as the dependent variable. If the overall F test is significant, univariate analyses of variance (ANOVA) will be conducted to test the significance of each construct mean. If significant, post hoc tests will be performed to determine the significance of certification with respect to the dependent measures. The same procedures will be used with gender as the independent variable.

Timeline of survey administration and data collection

Action	Approximate date
Finalize survey	January, 2009
Content area experts to check survey	January, 2009
Submit IRB forms	late January, 2009
Obtain permission to conduct research	late January, 2009- February, 2009
Conduct pilot study at northern schools	February, 2009
Run statistics on pilot study and adjust survey instrument as needed	Late February, 2009- March, 2009
Formulate web survey	March, 2009
Email contacts at three universities to be included in the study and seek study participants	March, 2009
Distribute survey via web link to participating schools	March, 2009
Data collection window	late March, 2009- April, 2009
Data Analysis & writing of final chapters	April 2009- September, 2009
Dissertation Defense	Fall, 2009

Chapter 4 Analysis of Data

Introduction

The purpose of this study was to identify preservice teacher beliefs, attitudes, and intentions towards the inclusion of students with disabilities in general education environment. Using Ajzen & Fishbein's Theory of Planned Behavior (1980), a survey instrument was created that would capture the multidimensional nature of attitude while being grounded in theory. The theory was used to guide instrument design, data analysis, and follow-up discussion. The survey instrument consists of four constructs: behavioral beliefs, normative beliefs, control beliefs, and generalized statements of intent. The demographics component gathers information regarding the participants' background (e.g. gender, age, concentration of study), the behavioral beliefs section evaluates knowledge and beliefs relative to inclusion, the normative beliefs construct measures participant perceptions of social pressure, and the construct for control beliefs will measure the participant's perceived behavioral control pertaining to the skills, knowledge, and activities assumed of teachers in an inclusive setting. The final construct

represents generalized statements about intentions regarding inclusive educational environments. Survey questions include nine demographic items and utilize a five- point Likert scale response format for 40 forced- choice items. The survey instrument was disseminated to students enrolled in the college of education at Clemson University, Coastal Carolina, and the College of Charleston.

Research questions for this study are as follows:

- 1. What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?*
- 2. What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?*
- 3. How do the attitudes of student subgroups compare with each other (e.g. elementary vs. secondary, males vs. females)?*

Chapter three summarized the method used for data analysis guided by the Theory of Planned Behavior (1980). Chapter four will summarize the results and decisions based on the pilot study, provide the timeline for data collection, review preparation of the data, and detail findings and results of the data collected from three southern schools according to each research question.

Pilot Study Results

Once the survey was developed following the guide provided by Ajzen (2006), the instrument was piloted using students at two schools in the northeastern United States. The purpose of the pilot study was to determine the reliability and validity of individual items on the survey instrument. Two questions were addressed during the pilot study phase of the research: (1) Do the survey items that directly measure attitude or intention yield a high reliability using the Cronbach's reliability measure? (2) Should any items be rephrased as a result of this preliminary data analysis?

Of the 43 total pilot survey responses, seven were deemed unusable due to incomplete responses. These disregarded surveys were not used in the data analysis. Three survey responses had partial data missing (e.g. one or two items were not answered). For these three responses, missing values were replaced using a mean substitution technique before analyzing the data (Buhi & Goodson, 2008). Several items needed to be reverse coded in order to maintain consistency in the scale. These included item numbers: 6, 7, 10, 13, 14, 15, 16, 18, 20, 25, 26, 27, 28, and 30.

The survey instrument consists of four constructs, three of which contain direct and indirect measures of belief, and one that will be used as a criterion variable in a later

multiple regression analysis. Direct measures of attitude in each of the first three constructs (behavioral beliefs, normative beliefs, and perceived behavioral control) were first analyzed for internal consistency (goal > 0.6). An analysis of the generalized statements of intent was also performed. Reliability measures for these constructs are summarized in table 4.1.

Table 4.1. Pilot study: Internal consistency of direct measures.

Construct (direct measures)	Reliability measure (α)
Behavioral beliefs	$\alpha= 0.889$
Normative beliefs	$\alpha= 0.462$
Perceived behavioral control	$\alpha=0.104$
Generalized statements of intent	$\alpha=0.765$

Based on the low measures for the normative beliefs ($\alpha= 0.462$) and perceived behavioral control ($\alpha=0.104$), several items were reworded and/or rephrased. Due to the low internal consistency of these particular constructs, the multiple regression analysis, which would determine the relationship between direct measures of intent and generalized belief statements, was postponed. Items that were rephrased and/or rewritten include: 29, 30, 33, 35, and 36. Because the questions regarding perceived behavioral

control received a low internal consistency, all were either rephrased or rewritten. Items from the behavioral beliefs construct as well as those under generalized statements of intent were maintained because they met the goal of $\alpha > 0.6$.

Timeline of data collection

Once the survey instrument was revised and ready for dissemination, gatekeepers at three southern public schools of higher education were contacted. The survey was distributed via an emailed web link to undergraduate students in each college of education. Survey results were collected using www.surveymonkey.com, and downloaded using the website tools. The data collection window was open for approximately 4 weeks; the initial request and two additional email reminders were sent to students in order to increase the response rate. One school provided no survey responses, indicating a possible problem with the dissemination of the survey link. From the two remaining schools, a total of 229 survey responses were collected.

Reliability of the Survey Instrument

Once the timeline for data collection closed, a condensed data set was downloaded from www.surveymonkey.com into an Excel spreadsheet. A total of 229

responses were collected. Extraneous information (e.g. collector ID) was deleted from the data set, and survey responses with empty or mostly missing data were deleted. A total of 80 responses were deleted leaving 149 usable responses out of the original 229 responses. Survey items requiring reverse coding were fixed to ensure consistency in the scales; a high response value indicates a positive attitude. Thirteen items required the reverse coding procedure. These were item numbers: 6, 7, 10, 13, 14, 15, 16, 18, 20, 25, 26, 27, 28, and 30.

Survey response questions were grouped by construct. Items requiring an internal consistency check included all direct measures of belief in each construct: item numbers 17, 18, 19, 20 (behavioral beliefs); 29, 31, 34, 39 (normative beliefs); 30, 33, 35, 36 (perceived behavioral control); and 32, 37, 38, and 40 (generalized statements of belief). Internal consistency for each construct met the goal of > 0.6 except for those items measuring normative beliefs. The Cronbach's alpha for this construct using all test questions was $\alpha = 0.440$, a weak internal consistency. However, two of the items were highly correlated; thus, the researcher determined the internal consistency of the construct using only these two items (29 & 39). This brought the reliability of this construct to $\alpha =$

0.697. The two remaining survey items were not used for further analysis due to their low reliability even when run as a separate scale.

Table 4.2. Reliability measures for direct items in the pilot and dissertation study

	Pilot study (α)	Larger study (α)
Behavioral beliefs	$\alpha = 0.889$	$\alpha = 0.815$
Normative beliefs	$\alpha = 0.462$	$\alpha = 0.697$ (items 29 & 39 only)
Perceived behavioral control	$\alpha = 0.104$	$\alpha = 0.614$
Generalized statements of intent	$\alpha = 0.765$	$\alpha = 0.797$

Findings and Results

Demographic variables and their frequencies are displayed in table 4.3. A total of 229 surveys were returned, and 149 of the surveys were deemed usable for data analysis. Study participants included 14 males (9%) and 135 females (91%) across two southern schools. Even though survey links and invitations to participate with reminders were sent to gatekeepers at three schools, data was only received from two of the schools. Of these undergraduate preservice teachers, the majority, 102 (68%) were between the ages of 18-21, 29 (20%) were between the ages of 22- 25, six (5%) were between the ages of 25- 30,

and 12 participants (10%) were over 30 years of age. The mean age was 22.51 years with a standard deviation of 6.564 years.

Demographic results for practicum hours may be skewed based on vague wording of the item. The item reads “Please use your numeric keypad to answer the following: Number of classroom practicum hours completed.” The large range of hours reported (0-2640) combined with other measures of central tendency (mean = 82.12, SD= 271.581) prompted the researcher to look closer at the wording of this item and led her to determine that classroom hours could be interpreted as collegiate hours or actual clock hours spent in the field. Due to the reporting that most participants ($n=109$, 73%) have not yet begun their student teaching component, these values for hours spent in the field are likely inaccurate. Practicum hours are reported, but they were not used in data analysis due to the greater possibility of low validity in this category.

Requirements for coursework completion as class status and as a prerequisite for student teaching or clinical experience vary at each school. Requirements at school A were not considered because of the absence of survey responses. Schools B and C are identical in their requirement for freshman and sophomore class status: 0- 29 hours for freshmen, and 30- 59 hours for sophomores. They differ in their requirement for junior

and senior status. School B requires 60- 94 hours for juniors; school C requires 60- 89 hours for juniors. School B requires 95 as the minimum hours for senior status; school C's minimum hour requirement for seniors is 90 hours. Based on coursework requirement information from schools B and C, most students who participated in the study had completed more than half of required hours of coursework for their degree program; 75% of participants had completed more than 50 hours of coursework. However 109 participants (73%) have not yet begun their student teaching component. A breakdown of coursework numbers includes 19 participants (13%) having taken 25 or less hours, 20 participants (16%) having taken between 26- 50 hours, 26 participants (19%) having taken 51-75 hours, 34 participants (26%) having taken between 76- 100 hours, and 36 participants (30%) having taken over 100 hours. The mean number of coursework hours taken is 76.30 (SD=44.386).

The researcher used school information along with coursework hours reported to categorize participants in freshman, sophomore, junior, or senior categories. This procedure resulted in 13% freshmen (n= 20), 17% sophomores (n= 26), 29% juniors (n= 43), and 30% seniors (n= 45). Eleven percent of participants (n= 16) did not respond to this demographic item.

The majority of survey participants sought general education certification, specifically early childhood, elementary, secondary, or other ($n=123$, 83%). Participants seeking special education certification make up the minority group at 17% ($n= 26$).

Most survey participants report experience working with those who have a disability ($n= 116$, 78%), but this experience is not within their own family. Thirty-seven participants (25%) have a family member who has a disability.

Table 4.3. Frequency distribution of demographic variables

Variable/ Category	<i>n</i>	%*	Mean	SD
School attended	149			
School A	0	0%		
School B	105	71%		
School C	44	30%		
Gender	149			
Male	14	9%		
Female	135	91%		
Age	149		22.51	6.564
18- 21	102	68%		
22- 25	29	20%		
25- 30	6	5%		
Over 30	12	10%		
Practicum hours**	118		82.12	271.581
0-50	84	59%		
51- 100	19	15%		
over 100	15	13%		
Coursework hours	134		76.3	44.386
0-25	19	13%		
26-50	20	16%		
51-75	26	19%		
76-100	34	26%		
over 100	36	30%		
Student status	134		2.843	1.054
Freshman (1)	20	13%		
Sophomore (2)	26	17%		
Junior (3)	43	29%		
Senior (4)	45	39%		
Certification area	149			
Early childhood	38	26%		
Elementary	40	27%		
Secondary	40	27%		
Special	26	17%		
Other	5	3%		

Family member with disability	149	
Yes	37	25%
No	112	75%
Experience with those who have a disability	149	
Yes	116	78%
No	33	22%
Begun student teaching	149	
Yes	40	27%
No	109	73%

* percentages are rounded to the nearest whole value

** information from this category was not used in data analysis due to the large range of data responses, high variance, and greater possibility of low validity

The demographic distribution of the sample for this dissertation is similar to one of the public universities that participated in the study. Data on the school of education was obtained, and percentages for class status and certification are similar in number. The largest difference is found in the number of undergraduate students seeking certification in secondary education. The sample included 27% seeking secondary certification, and the school of education in comparison has 39%. A comparison of these percentages can be found in table 4.4.

Table 4.4. Demographic variables comparison*

	Dissertation Study	One participating public university
<u>Class Status</u>		
Freshman	13%	21%
Sophomore	17%	26%
Junior	29%	21%
Senior	39%	32%
<u>Certification</u>		
Early Childhood	26%	15%
Elementary	27%	31%
Secondary	27%	39%
Special education	17%	14%
Other	3%	1%

* percentages do not total to 100 due to rounding

Research Questions and Associated Hypotheses

The three research questions, their respective hypotheses and the data analysis for each are reported below.

Research Question 1

What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Hypothesis 1

The researcher hypothesizes that the attitude toward the inclusion of students with disabilities in a predominately general education environment will be positive.

Data Analysis 1

Attitude and beliefs toward inclusion of students in a predominately general education environment were measured in two ways: 1) general attitude statements, and 2) specific attitude statements. “Direct and indirect measurement approaches make different assumptions about underlying cognitive structures” (Francis et al., 2004), therefore analysis for the two types of survey items was performed separately. Each question type is correlated with intention to work in an inclusive educational environment. Before analysis is provided for the behavioral, normative, and control constructs, a breakdown of items measuring intention is provided.

Intent to work in an inclusive educational setting was measured using four general statements: 1) I expect to teach in an inclusive educational environment, 2) I want to teach students with different levels of ability, 3) I intend to teach in an inclusive educational environment, and 4) If you are offered a position as a teacher in an inclusive educational environment, how likely are you to accept the job? The mean responses for all items measuring intent are above 3.0, indicating agreement with the statements.

Table 4.5. Means and Standard Deviations for items measuring Intention to Teach in an Inclusive Educational Environment

Intention statement	Mean	SD	Low	High
I expect to teach in an inclusive educational environment. (strongly disagree- strongly agree)	3.53	1.118	1	5
I want to teach students with different levels of ability. (strongly disagree- strongly agree)	4.12	.931	1	5
I intend to teach in an inclusive educational environment. (strongly disagree- strongly agree)	3.49	1.097	1	5
If you are offered a position as a teacher in an inclusive educational environment, how likely are you to accept the job? (unlikely- likely)	4.14	.976	1	5

Mean scores for each direct measure of attitude in each construct were used to determine if beliefs were positive, negative, or neutral. Though the survey instrument has not been used previously in this form, the researcher was able to consider the range of the Likert scale choices to make this determination. Table 4.5 displays psychometric characteristics for direct measures in each construct. Mean scores for each construct are greater than 3.0, representing a positive attitude for preservice teachers toward an inclusive educational environment. Alpha scores indicate that reliability of each construct is moderate to high.

Table 4.6. Psychometric Characteristics for Individual Indexes

Scale	# of items	Mean	SD	Low	High	Alpha
Behavioral Beliefs	4	3.66	0.819	1.00	5.00	$\alpha = 0.815$
Normative Beliefs	2	3.577	0.934	1.00	5.00	$\alpha = 0.697$
Perceived Behavioral Control	4	3.596	0.659	1.00	5.00	$\alpha = 0.614$
Generalized Statements of Intent	4	3.821	0.805	1.00	5.00	$\alpha = 0.797$

Information on individual items for direct measures can be viewed in table 4.6.

Preservice teachers in general feel that the inclusive educational environment is good practice. Response means for all items within the behavioral beliefs construct are above 3.0, thus indicating generally positive attitudes towards the inclusive environment. Correlations of item response means within the behavioral beliefs construct are all statistically significant at the .01 level; all correlations with intention were in the moderate range except with the item asking participants to rate the inclusive environment as unpleasant or pleasant ($r = .334$). This result indicates that preservice teacher beliefs about the pleasantness of the inclusive environment are unrelated to their intent to work in such an environment. Preservice teachers in this study generally receive positive social

pressures regarding inclusive environments. Social expectations to approve of heterogeneous groupings received the highest mean score, 3.77, though it received a low correlation coefficient, $r = .219$ for its relationship to intention. The item referring to social pressures to favor an inclusive environment received a positive mean score, 3.16, though its correlation to intention was not statistically significant. Items referring to those people who are important to the participant had moderate correlations to intention (item #29: $r = .442$, item #39: $r = .622$). Preservice teachers in this study also have positive responses in regard to the skills, knowledge, and activities assumed of the inclusion teacher. Implementation of IEP requirements is the highest rated skill set of the four included in the TPBI (mean = 3.87). Two items in this construct had statistically significant correlations with intention at the 0.05 level: the items addressing implementation of IEP provisions and the item on expectation of training availability for research-based practices; however these correlations were in the low range ($r = .186$, $r = .206$ respectively).

Table 4.7. Means and Standard Deviations for Direct Measures by individual item, and Correlations of each item with the intent to work in an inclusive setting

Items by construct	Mean	SD	Low	High	Correlation with Intention
<i>Behavioral beliefs.</i>					
Overall, I think inclusive educational environments are...					
17) Harmful- beneficial	3.74	.996	1	5	.584**
18) Unpleasant- pleasant	3.46	1.043	1	5	.334**
19) The wrong thing to do- the right thing to do	3.67	.962	1	5	.648**
20) Bad practice- good practice	3.79	1.100	1	5	.549**
<i>Normative beliefs.</i>					
Strongly disagree- strongly agree					
29) People who are important to me think inclusive educational environments are beneficial for students with academic learning disabilities.	3.46	1.148	1	5	.442**
34) I feel social pressure to favor an inclusive educational environment.	3.15	1.186	1	5	-.002
31) It is expected of me that I approve of heterogeneous classroom groupings (e.g. disabled and nondisabled).	3.77	1.122	1	5	.219**
39) People who are important to me believe inclusive educational environments promote acceptance of differences among students.	3.69	1.007	1	5	.622**
<i>Control beliefs.</i>					
33) I will have the resources needed to use/ implement progress monitoring in my classroom (unlikely- likely)	3.65	.834	1	5	.165
36) I feel capable of implementing IEP provisions in my classroom (strongly disagree- strongly agree)	3.87	.949	1	5	.186*
35) Programs or professional development will be available so I can continue to learn about research based practices (unlikely- likely)	3.61	.925	1	5	.206*
30) I have control over how much or how often I collaborate with other professionals to make decisions about students (strongly disagree- strongly agree).	3.26	1.218	1	5	.049

* $p < 0.05$, ** $p < 0.01$, direct measures of beliefs scored 1 – 5

While the direct measures demonstrate that preservice teacher attitudes and beliefs are moderately positive toward the practice of inclusion, the specific underlying beliefs will provide more detailed information about the factors that guide their behavior. However, before conclusions can be drawn from these items, a correlational analysis was performed between direct and indirect items of the same construct. A strong correlation would confirm identification and proper measurement for the accessible beliefs. These correlations are displayed in table 4.7.

Table 4.8. The Bivariate Correlations of the Predictors with the Direct Measures of Behavioral Belief means.

	Behavior (direct)	Subjective Norm (direct)	PBC (direct)
Weighted measure of behavioral beliefs and outcome evaluation	0.501**	0.475**	0.172*
Weighted measure of normative beliefs and motivation to comply	0.352**	0.255**	0.114
Weighted measure of control belief and power to influence	0.201*	0.128	0.380**

* $p < 0.05$, ** $p < 0.01$

Beginning with behavioral beliefs, the direct measure mean was correlated with the weighted index scores (summed products of behavioral beliefs and outcome evaluations). The Pearson's r was 0.501, $p < 0.01$, which indicates the set of items for

behavioral beliefs works well to capture overall attitude. Other constructs did not correlate as well. Items in the PBC construct were moderately correlated, $r = 0.380$, $p < 0.01$. Items in the construct measuring subjective norms had a low correlation, $r = 0.255$, $p < 0.01$.

For analysis using the indirect measures of attitude (behavioral belief and outcome evaluation, normative belief and motivation to comply, and strength of the control belief and the power to influence), each belief statement was weighted using multiplication to create a new variable representing the weighted score for each belief. Mean substitution procedures were used for any missing values before multiplication. These scores were then combined to create a total attitude score for each response. The formula is noted below:

$$A = (a \times e) + (b \times f) + (c \times g) + (d \times h)$$

Where A = total attitude score

a , b , c , and d are scores for each of 4 behavioral (or normative, or PBC) beliefs

e , f , g , and h are scores for outcome evaluations (or motivation to comply, or power to influence) relating to each previous belief.

A total attitudinal mean was calculated to provide an overall perspective of all participants. The possible range of scores is -40 to $+40$ for each construct. A score of zero is considered neutral. These mean values are displayed in table 4.8. Responses from preservice teachers are highest in the area of behavioral beliefs about the practice of inclusion (mean = 23.26); it is important to note that this is the only construct in which all responses were in the positive range (minimum = 1, maximum = 36). Responses are lowest in the influence of social pressures on preservice teacher beliefs toward the practice of inclusion (mean = 6.42). The area of perceived behavioral control, like the other constructs, reflects a positive attitude; however, the high standard deviation of responses indicates this estimate is likely error laden (SD = 19.384).

A one-sample t -test was conducted on the weighted mean scores of each construct (behavioral, normative, PBC) to evaluate whether their mean was significantly different from zero, the score representing neutral attitude. All mean scores were significant: behavioral, $t(148) = 40.26, p < .01$; normative, $t(148) = 8.52, p < .01$; PBC, $t(148) = 6.15, p < .01$.

Table 4.9. Total attitudinal mean scores of the weighted indirectly measured items.

Indirect measure	N	Minimum	Maximum	Mean	SD
Behavior beliefs	149	1	36	23.26*	7.052
Normative beliefs	149	-17	27	6.42*	9.190
Perceived behavioral control beliefs	149	-32	38	9.76*	19.384

* mean is significantly different from zero, $p < .01$

Behavioral beliefs. In order to gain an understanding of preservice teacher beliefs about the practice of inclusion, the researcher examined results for behavioral beliefs and outcome evaluations. Data for specific items is displayed in table 4.9. Though all results for behavioral beliefs and outcome evaluations are in the positive range, there are differences within the responses that may indicate a hierarchy of concern. Preservice teachers appear to be most concerned about the benefit to general education students (mean = 3.66) when compared to mean scores of other behavioral strengths; the item with the lowest belief strength agreement states that inclusive settings create more work for the primary teacher (mean = 2.61). Extra work for the teacher has the highest of the outcome evaluation scores (mean = 1.76), indicating that though preservice teachers are near neutral in their agreement that inclusive settings create more work for the teacher, they would likely do extra work for these students. Benefit to students with learning

disabilities received the lowest outcome evaluation score. When these item results are multiplied to determine a belief score using specific factors about the practice of inclusion, the item with the highest product focused on the concern for benefit to students who do not have an academic learning disability. A paired-samples t test was conducted to evaluate which group the preservice teacher is more concerned with benefiting from the inclusive classroom. The results indicate that the mean concern for students without a disability ($M= 6.65$, $SD= 2.67$) was significantly greater than the mean concern for students with a disability ($M= 6.21$, $SD= 2.65$), $t(146)= 2.35$, $p < .05$. The 95% confidence interval for the mean difference between the two mean responses was .07 to .82. The survey items with the lowest of the four products focused on the generation of more work for the primary teacher. Three of the four relationships between behavioral beliefs and intention were statistically significant at the 0.01 level; the correlation of intent and additional work was not significant ($p = 0.670$). The greatest predictor of a preservice teacher's intent to work in an inclusive setting is the benefit received by students with learning disabilities.

Table 4.10 Means and Standard Deviations for Behavioral Belief Strength and Outcome Evaluation, and Correlations of the Belief-Evaluation Product with Intention

Outcome	Belief Strength (b)		Outcome Evaluation (e)		Belief-Evaluation Product	Correlation $b_i e_i$ with intention
	M	SD	M	SD		
Student with academic LD benefiting from inclusive environment	3.61	.998	1.70	.557	6.20**	.472*
Causing worry and concern to student with academic LD	3.08	.992	1.76	.611	5.45**	.327*
Students without academic LD benefiting from inclusive environment	3.66	1.064	1.79	.470	6.65**	.447*
Generation of more work for the primary teacher	2.61	1.368	1.90	.302	4.98**	.036

Note. Behavioral beliefs scored from 1 to 5; Outcome evaluation scored from -2 to +2; $b_i e_i$ = behavioral belief x outcome evaluation; Belief-evaluation product can range from -10 to +10; * $p < 0.01$, ** mean is significantly different from zero ($p < .01$)

Normative beliefs. Social pressure to perform or not perform a behavior is another component in the theory of planned behavior. In order to gain an understanding of the way in which these pressures influence preservice teacher beliefs about the practice of inclusion, the researcher examined results for normative beliefs and motivation to comply. Data for specific items is displayed in table 4.10. It is important to note that weighted items in the normative construct resulted in low convergent and discriminant validity. The following findings are likely inaccurate, and must be considered with

caution. Most of the means for belief strengths hover around 3.0, a neutral measure. Of these mostly neutral measures, preservice teachers appear to believe college professors have the most positive opinions toward inclusive educational environments (mean = 3.21) when compared to mean scores of other referents; the group believed to have the least positive attitude towards inclusion is the preservice teacher's peer group (mean = 2.89). The preservice teacher's future students are the greatest motivating factor (mean = 1.09). Teachers in the field have the least amount of motivational influence (mean = -0.19). When these item results are multiplied to determine a score that reflects the influence of social pressures on preservice teacher beliefs toward the practice of inclusion, only products that were significantly different from zero, the value representing a neutral attitude, were considered. The one-sample *t*-test results are as follows: teachers in the field, ($M = -.40$, $SD = 3.11$), $t(148) = -1.58$, $p = .12$; college professors, ($M = 1.93$, $SD = 3.67$), $t(148) = 6.42$, $p < .01$; future students, ($M = 3.42$, $SD = 3.15$), $t(148) = 13.26$, $p < .01$; and preservice teachers like me, ($M = 1.47$, $SD = 3.07$), $t(148) = 5.85$, $p < .01$. The group with the highest product was the preservice teacher's future students. The group with the lowest of the three applicable products was college professors. None of the correlations between motivation products and intention were statistically significant.

Table 4.11. Means and Standard Deviations for Normative Belief Strength and Motivation to Comply, and Correlations of the Motivation Product with Intention to work in an inclusive setting

	Belief Strength (n)		Motivation to Comply (m)		Motivation Product	Correlation $n_i m_i$ with intention
	M	SD	M	SD		
Normative referent						
Teachers in the field	3.03	1.003	-0.19	1.005	-0.403	0.143
College professors	3.21	1.326	0.58	0.987	1.933**	0.120
Future students	3.06	1.187	1.09	0.825	3.416**	0.125
Preservice teachers like me	2.89	1.255	0.61	0.942	3.066**	-0.035

Note. Normative beliefs scored from 1 to 5; Motivation to comply scored from -2 to +2; $n_i m_i$ = normative belief x motivation to comply, Motivation product can range from -10 to +10; * $p < 0.01$, **mean is significantly different from zero ($p < .01$)

Control beliefs. Certain knowledge, skills, and activities are assumed of inclusion teachers. Examples used in the TPBI include progress monitoring, implementing provisions on the IEP, utilizing research- based practices, and collaborating with other service providers. The significance of weighted mean values and the extent to which these factors may contribute to a preservice teacher's intent to teach in an inclusive setting was examined in the following analysis. Data for specific items is displayed in table 4.11. Preservice teachers view collaboration with other service providers as their highest skill area (mean = 4.27); the knowledge that participants felt most uneasy about was the use of research- based practices in the inclusive classroom (mean = 2.74). Mean scores on items measuring power to influence hover between zero and one, a near neutral measure. Of these scores, the use of progress monitoring in the classroom has the least

influence (mean = 0.60); collaboration with other service providers has the most influence (mean = 0.74). However, the large standard deviation for these responses indicates that this statistic may be error laden. Item results were multiplied to determine a score that reflects the influence of perceived control on preservice teacher beliefs toward the practice of inclusion. A one-sample *t*-test was conducted to evaluate whether the products were significantly different from zero, the value representing neutral attitude. The results are as follows: progress monitoring, ($M = 2.72$, $SD = 5.64$), $t(148) = 5.90$, $p < .01$; IEP implementation, ($M = 2.38$, $SD = 5.41$), $t(146) = 5.34$, $p < .01$; use of research-based practices, ($M = 1.38$, $SD = 3.57$), $t(147) = 4.70$, $p < .01$; and collaboration with service providers, ($M = 3.26$, $SD = 7.28$), $t(148) = 5.47$, $p < .01$. The skill with the highest product was the ability to collaborate with other service providers. The skill with the lowest of the four products the ability to use research-based practices in the inclusive classroom. None of the correlations between control products and intention were statistically significant.

Table 4.12. Means and Standard Deviations for Control Belief Strength and Power to Influence, and Correlations of the Control Product with Intention to work in an inclusive setting

Control factor	Belief strength (c)		Power to influence (p)		Control Product	Correlation $c_i p_i$ with intention
	M	SD	M	SD		
Use of progress monitoring	3.98	0.818	0.60	1.314	2.725**	0.067
Implementation of IEP provisions	3.24	1.144	0.68	1.481	2.381**	0.153
Use of research- based practices	2.74	1.041	0.64	1.294	1.378**	0.056
Collaboration with other service providers	4.27	0.970	0.74	1.649	3.262**	0.139

Note. Control beliefs scored from 1 to 5; Power to influence scored from -2 to +2; $c_i p_i$ = control belief x power to influence; Control product can range from -10 to +10; * $p < 0.01$, **mean significantly different from zero ($p < .01$).

In order to determine if preservice teacher attitude toward an inclusive educational environment is predictive of their intent to teach in inclusive settings, a stepwise multiple regression analysis was conducted. This procedure predicts the generalized statements of intent from the three survey constructs. Intention was entered as the dependent variable, and the mean scores for each directly measured construct were entered as the predictor variables. The linear combination of all three components of belief was significantly related to the intention index, $F(3,139) = 43.340, p < 0.01$. The multiple correlation coefficient was 0.695, indicating that the linear combination of the

three constructs combined (behavioral beliefs, normative beliefs, and perceived behavioral control) accounts for 47% of the variance in the generalized statements of intent, $R = 0.695$, $R^2 = 0.483$, adjusted $R^2 = 0.472$. Table 4.12 presents the indices to indicate the relative strength of the individual predictors.

When analyzed separately, two constructs (behavioral beliefs and normative beliefs) are significant at the 0.01 level; the normative beliefs construct accounts for 34% of the variance, $R = 0.589$, $R^2 = 0.347$, adjusted $R^2 = 0.343$, Beta = 0.589, and the behavioral beliefs construct accounts for 43% of the variance, $R = 0.655$, $R^2 = 0.430$, adjusted $R^2 = 0.425$, Beta = 0.655. The perceived behavioral control construct was also significant in predicting the generalized intention statements, $p < 0.05$; however, it only accounted for 4% of the variance in the intention statements, $R = 0.209$, $R^2 = 0.044$, adjusted $R^2 = 0.037$, Beta = 0.209.

The low R squared value on the PBC index compared to the behavioral and normative indexes could be attributed to the following factors: 1) the vicissitude of one's perception from moment to moment, 2) the difficulty of measuring someone's perceptions with the use of a survey, and 3) the influence of a learning effect based on the terminology used within the construct (Francis et al., 2004). For example, these questions

ask about Progress Monitoring, IEP provisions, research based practices, and collaboration with other service providers. The preservice teacher may have limited knowledge of these areas, therefore affecting the validity of the construct.

Table 4.13. Regression for Direct Measures with Intention Index

Predictors	Mean	SD	Correlation between each predictor and the intention index (zero order Pearson Correlation)	Correlation between each predictor and the intention index controlling for all other predictors (partial)	Beta
Behavioral Beliefs	3.641	0.810	0.634**	0.405**	0.432**
Normative Beliefs	3.566	0.941	0.572**	0.284**	0.286**
Perceived Behavioral Control	3.595	0.657	0.195*	0.146*	0.110*

* $p < 0.05$, ** $p < 0.01$

Results from the analysis of direct and indirect measures indicate that the average participant has positive attitudes or beliefs toward the inclusion of students with disabilities in the general education classroom. Means for the directly measured items were all above 3.0 on the 1-5 Likert scale, and all weighted indirect measures were in the positive range. For the question of intention, which would link attitude to behavior, survey results indicate that the basic beliefs a person holds along with positive societal influence would likely translate into positive behaviors toward students with disabilities

in this setting; however, preservice teachers' perceptions of control accounted for little of the variance in the intention index. Therefore, the hypothesis for question one is retained.

Theoretical Implications

In order to examine the extent to which the theory of behavioral control was able to explain intentions to teach in an inclusive setting, regression analysis was performed using intention as the dependent variable and direct measures as predictor variables. Results of the regression analysis are displayed in table 4.13. Results indicate that the Theory of Planned Behavior was able to account for 47% of the variance in preservice teachers' intention to teach in an inclusive setting. If analyzed without the PBC component (the theory of reasoned action), the percent of variance does not change, $R^2 = 0.472$, adjusted $R^2 = 0.465$, $F[2,140] = 62627$, $p < 0.01$). This indicates that the theory of planned behavior does not substantially improve the prediction of intent as measured in this study. However, in both theoretical applications, the participant's behavioral beliefs about inclusive educational settings were more indicative of intent than were the other two predictors.

Table 4.14. Regression analyses for intention in light of the Theory of Planned behavior

	Intent to teach in an inclusive educational setting		
	Pearson's r	Beta	Adjusted R^2
<i>Theory of reasoned action</i>			0.465
Behavioral belief	0.655**	0.472**	
Subjective norm	0.589**	0.276**	
<i>Theory of planned behavior</i>			0.472
Behavioral belief	0.655**	0.449**	
Subjective norm	0.589**	0.282**	
Perceived behavioral control	0.209	0.107	

Research Question 2

What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

Hypothesis 2a

The researcher foresees positive attitudes toward persons with disabilities from study participants who have had more hours of coursework.

Hypothesis 2b

The researcher foresees negative attitudes toward persons with disabilities from study participants who have had fewer hours of coursework.

Data Analysis 2

A multivariate analysis of variance (MANOVA) was conducted to determine the effect of class status (freshman, sophomore, junior, senior) on the seven attitude scores

(the directly measured behavioral, normative, PBC, and intent, and the indirectly measured behavioral, normative and PBC). No significant differences were found among the classes on the dependent measures, Wilks's $\Lambda = .793$, $F(21,328) = 0.793$, $p = .163$.

The multivariate η^2 based on Wilks's Λ was moderate, .074. Table 4.14 contains the means and standard deviations on the dependent variables for the four classes. A significance criterion for the univariate F of .007 was determined by dividing .05 (the standard in education) by seven, the number of attitude scores.

Table 4.15. Means and Standard Deviations on the Dependent Variables for Class Status

	Freshmen n = 20	Sophomore n = 26	Junior n = 43	Senior n = 45	Univariate F
BB mean	$M= 3.34$ $SD= .78$	$M= 3.68$ $SD=.73$	$M= 3.64$ $SD=0.84$	$M= 3.76$ $SD=0.81$	1.18
Norm mean	$M= 3.42$ $SD=0.99$	$M= 3.40$ $SD=0.87$	$M= 3.54$ $SD=0.96$	$M= 3.73$ $SD=0.85$	0.89
PBC mean	$M= 3.71$ $SD=0.58$	$M=3.65$ $SD=0.58$	$M= 3.43$ $SD=0.63$	$M= 3.65$ $SD=0.73$	1.17
Intent mean	$M= 3.62$ $SD=0.88$	$M= 3.64$ $SD=0.77$	$M= 3.82$ $SD=0.75$	$M= 3.90$ $SD=0.83$	0.83
Weighted BB	$M= 24.26$ $SD=7.10$	$M= 21.42$ $SD=8.50$	$M= 22.41$ $SD=6.34$	$M= 24.93$ $SD=6.90$	1.60
Weighted Norm	$M= 8.00$ $SD=7.77$	$M= 6.67$ $SD=10.03$	$M= 6.48$ $SD=10.56$	$M= 6.29$ $SD=7.70$	0.16
Weighted PBC	$M= 3.37$ $SD=20.26$	$M= 6.08$ $SD=20.99$	$M= 8.55$ $SD=18.90$	$M= 16.69$ $SD=17.49$	2.86

Note. Direct measured items scored from 1 to 5; weighted scores from -40 to +40

* Difference between means significant at $p < .007$

A follow-up MANOVA was conducted to determine the effect of student teaching (started student teaching, not started student teaching) on the seven attitude scores (the directly measured behavioral, normative, PBC, and intent, and the indirectly measured behavioral, normative and PBC). No significant differences were found on the dependent measures between those who have or have not started student teaching, Wilks's $\Lambda = .919$, $F(7, 129) = 1.63$, $p = .132$. The multivariate η^2 based on Wilks's Λ was moderate, .081. Table 4.15 contains the means and standard deviations on the dependent variables for student teaching.

Table 4.16. Means and Standard Deviations on the Dependent Variables for Student Teaching*

	BB mean	Norm Mean	PBC mean	Intent Mean	Weighted Behavior	Weighted Norm	Weighted PBC
Student Teachers n= 40	$M= 3.67$ $SD= .77$	$M= 3.58$ $SD= .87$	$M= 3.74$ $SD=.68$	$M= 3.84$ $SD= .72$	$M= 23.94$ $SD= 6.08$	$M= 3.63$ $SD= 7.63$	$M= 15.20$ $SD= 19.42$
Not yet begun Student Teaching n= 109	$M= 3.63$ $SD= .83$	$M= 3.56$ $SD= .97$	$M= 3.54$ $SD= .64$	$M= 3.79$ $SD= .83$	$M= 23.09$ $SD= 7.29$	$M= 7.49$ $SD= 9.62$	$M= 7.76$ $SD= 19.23$
Univariate F	.07	.01	2.48	.10	.40	4.93	4.09

Note. Direct measured items scored from 1 to 5; weighted scores from -40 to +40

* None of the results in this table were significant at $p < .007$

Hypotheses 2a and 2b are rejected because there are no significant differences between class status or student teaching status and attitude means.

Research Question 3

How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

Hypothesis 3a

The researcher hypothesizes attitudes of early childhood and elementary preservice teachers will be more positive than secondary preservice teachers.

Hypothesis 3b

The researcher foresees attitudes of special education majors will be more positive than attitudes of general education majors.

Hypothesis 3c

The researcher foresees that females will have more positive attitudes than males.

Data Analysis 3

A multivariate analysis of variance was conducted to determine the effect of the five areas of certification (early childhood, elementary, secondary, special, other) on the seven attitude scores (the directly measured behavioral, normative, PBC, and intent, and the indirectly measured behavioral, normative and PBC). Significant differences were

found among the five certification areas on the dependent measures, Wilks's $\Lambda = .687$, $F(28,456) = 1.79, p < .01$. The multivariate η^2 based on Wilks's Λ was moderate, .09, indicating that 9% of the multivariate variance of the dependent variables is associated with certification area. Table 4.16 contains the means and standard deviations on the dependent variables for the five groups.

Table 4.17. Means and Standard Deviations on the Dependent Variables for Certification Groups

	Early Childhood n = 38	Elementary n = 40	Secondary n = 40	Special n = 26	Other n = 5	Univariate <i>F</i>
BB mean	<i>M</i> = 3.74 <i>SD</i> = 0.76	<i>M</i> = 3.73 <i>SD</i> = .76	<i>M</i> = 3.42 <i>SD</i> = 0.91	<i>M</i> = 3.67 <i>SD</i> = 0.77	<i>M</i> = 3.81 <i>SD</i> = 0.85	0.99
Norm mean	<i>M</i> = 3.76 <i>SD</i> = 0.88	<i>M</i> = 3.54 <i>SD</i> = 0.88	<i>M</i> = 3.26 <i>SD</i> = 1.04	<i>M</i> = 3.86 <i>SD</i> = .91	<i>M</i> = 3.25 <i>SD</i> = .50	2.14
PBC mean	<i>M</i> = 3.65 <i>SD</i> = 0.59	<i>M</i> = 3.44 <i>SD</i> = .61	<i>M</i> = 3.36 <i>SD</i> = .59	<i>M</i> = 4.11 <i>SD</i> = .63	<i>M</i> = 3.5 <i>SD</i> = 0.89	6.47*
Intent mean	<i>M</i> = 3.97 <i>SD</i> = .71	<i>M</i> = 3.86 <i>SD</i> = 0.75	<i>M</i> = 3.59 <i>SD</i> = 0.82	<i>M</i> = 3.85 <i>SD</i> = 0.87	<i>M</i> = 3.5 <i>SD</i> = 1.24	1.21
Weighted BB	<i>M</i> = 25.19 <i>SD</i> = 7.96	<i>M</i> = 22.78 <i>SD</i> = 6.76	<i>M</i> = 21.00 <i>SD</i> = 6.07	<i>M</i> = 24.99 <i>SD</i> = 6.50	<i>M</i> = 24.25 <i>SD</i> = 6.85	2.12
Weighted Norm	<i>M</i> = 6.97 <i>SD</i> = 9.06	<i>M</i> = 7.95 <i>SD</i> = 9.20	<i>M</i> = 3.76 <i>SD</i> = 8.51	<i>M</i> = 7.12 <i>SD</i> = 10.71	<i>M</i> = 7.75 <i>SD</i> = 6.85	1.12
Weighted PBC	<i>M</i> = 13.45 <i>SD</i> = 18.02	<i>M</i> = 9.01 <i>SD</i> = 18.90	<i>M</i> = 7.62 <i>SD</i> = 17.06	<i>M</i> = 9.80 <i>SD</i> = 25.66	<i>M</i> = 8.00 <i>SD</i> = 19.80	0.42

Note. Direct measured items scored from 1 to 5; weighted scores from -40 to +40

* Difference between means significant at $p < .007$

Analyses of variance (ANOVA) on each dependent variable were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .007 level. One ANOVA was significant: PBC $F(4,132) = 6.47, p < .007, \eta^2 = .16$, a strong effect size; the following ANOVAs were not significant: behavioral beliefs $F(4,132) = 0.99, p = 0.41, \eta^2 = .03$; normative beliefs $F(4,132) = 2.14, p = 0.08, \eta^2 = .06$; general intent $F(4,132) = 1.21, p = 0.31, \eta^2 = .04$; weighted behavioral beliefs $F(4,132) = 2.12, p = 0.08, \eta^2 = .06$; weighted normative beliefs $F(4,132) = 1.12, p = 0.35, \eta^2 = .03$; and weighted PBC beliefs $F(4,132) = 0.42, p = 0.79, \eta^2 = .01$. Hypotheses 3a and 3b consider overall attitude across certification areas. Because ANOVAs were not significant for all attitudinal constructs, these hypotheses are rejected.

Post hoc analyses to the univariate ANOVA for the PBC beliefs consisted of conducting pairwise comparisons to find which areas of certification held a greater perception of general behavioral control. Each pairwise comparison was tested at the .007 divided by seven or .001 level. There are no significant differences in general perception of behavioral control between those seeking certification in early childhood, elementary, and secondary education; however, data indicate preservice teachers in special education

have a higher perception of behavioral control than those seeking certification in elementary or secondary education.

A separate MANOVA was conducted to determine the effect of gender on attitude. Gender was loaded as the independent variable, and the dependent variables from the preceding MANOVA for certification remained the same. Homogeneity of variance was proven by an insignificant Levene's test for all survey constructs. No significant difference was found for males and females on the overall model, Hotelling's Trace = 0.027, $F(7,129) = 306.578$, $p = .83$. The multivariate η^2 based on Hotelling's Trace indicates a small effect, .03; therefore hypothesis 3c is rejected. Table 4.17 contains the means and standard deviations on the dependent variables for gender.

Table 4.18. Means and Standard Deviations on the Dependent Variables for Gender

	BB mean	Norm Mean	PBC mean	Intent Mean	Weighted Behavior	Weighted Norm	Weighted PBC
Male n= 14	$M= 3.56$ $SD= .83$	$M= 3.42$ $SD= .63$	$M=3.48$ $SD=.60$	$M=3.75$ $SD=.70$	$M=21.5$ $SD=7.22$	$M=2.83$ $SD=11.04$	$M= 11.75$ $SD=14.74$
Female n= 135	$M= 3.65$ $SD= .81$	$M= 3.58$ $SD= .97$	$M=3.61$ $SD=.66$	$M= 3.81$ $SD=.81$	$M=23.5$ $SD=6.94$	$M= 6.77$ $SD=9.04$	$M= 9.64$ $SD=19.94$
Univariate <i>F</i>	0.12	0.33	0.41	0.05	0.91	2.0	0.13

Note. Direct measured items scored from 1 to 5; weighted scores from -40 to +40

* Difference between means significant at $p < .007$

Summary

This chapter presented a statistical analysis of data collected from two of the original three southern schools. Item and construct analysis was performed with the use of descriptive statistics, correlations, one- sample and paired- samples *t*- tests, MANOVA, ANOVA, and multiple regression techniques. Quantitative analysis reveals information about the survey instrument, aspects that work well and aspects for revision. Analysis specific to the research questions indicate that while preservice teacher attitudes toward inclusive environments are positive, these students lack confidence in their ability to use research based methods in the classroom. They are also only somewhat positive about their ability to implement IEP provisions. The following chapter will consider implications of these findings in light of the Theory of Planned Behavior. In addition, limitations of the current study and direction for future research are presented in chapter five.

Chapter 5 Findings, Conclusions, and Implications

Introduction

The purpose of this study was to identify present preservice teacher beliefs, attitudes, and intentions towards the inclusion of students with disabilities in a predominately general education environment. A survey was developed based on the Theory of Planned Behavior (Ajzen, 1991; Ajzen & Driver, 1992; Ajzen & Fishbein, 1980). Quantitative data analysis, including the use of descriptive statistics, correlations, one- sample and paired- samples *t*- tests, ANOVA, MANOVA, and multiple regression techniques were used to determine the validity and reliability of the instrument then evaluate beliefs and intentions. Beliefs were measured based on three components: 1) the respondent's favorability toward the behavior, 2) the amount of social pressure the respondent feels to perform the behavior, and 3) the amount of control the respondent feels he/she has to perform or not perform the behavior (Francis et al., 2004). Intention was measured by regression analysis between belief constructs and the construct containing generalized statements of intent. This chapter describes conclusions drawn

from the findings in chapter four. These conclusions build upon the current literature in the area of teacher attitudes in inclusive settings and relate to the theory of planned behavior, which guided formation of the survey instrument. Research limitations and implications for undergraduate educational programs are also included in this chapter.

This study adds to the literature base by echoing the results of published studies; however, some of the findings in this study provide evidence unlike previous ones. Current literature tends to be limited in theoretical foundation; this study utilizes an instrument grounded in theory that also captures the multidimensional aspect of attitude. This research also expands upon other studies by surveying multiple schools of higher education; a high number of published studies take place at a single institution.

Data analysis focused on three research questions:

- 1) *What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?*
- 2) *What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?*
- 3) *How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?*

The sample of participants for this research was drawn from two institutions of higher education in South Carolina. A link to the survey was emailed to gatekeepers at three institutions with instructions to disseminate it amongst the undergraduate student population enrolled in their school of education. Two of the three institutions participated, yielding 229 responses. A total of 80 responses were deleted due to empty or mostly missing data, leaving 149 usable responses. Both participating universities are public institutions in South Carolina; one is located in the upstate, and the other is located at the coast. Based on enrollment numbers for the spring of 2009 at one institution, the response rate is estimated at close to sixteen percent (730 students enrolled in the school of education). This response rate was calculated under the assumption that the number of students enrolled in the schools of education at each participating university was similar. If enrollment numbers at the participating schools are similar, the response rate for this study is considered adequate (Gay, Mills, & Airasian, 2006). Therefore, based on these assumptions, the response rate resulted in a suitable sample size for the purposes of this study.

An ANOVA was run in order to ascertain whether the participants from each participating institution were homogeneous in their responses. No differences were found

amongst survey participants in responses to direct or indirect survey items when separated by school. Therefore, predictive validity of the instrument, as discussed in the following analyses, is strengthened.

What follows is a review of the survey instrument as well as conclusions based on findings from statistical analysis presented in chapter four. Each research question and hypothesis are provided prior to the review. A discussion follows on how the findings for this research study link to both the theory of planned behavior and literature on preservice and inservice teacher attitudes. The results of this research provide useful information for schools of higher education on how to better prepare preservice teachers for the inclusive classroom environment. Implications for future research are also discussed.

Analysis of the Instrument

This dissertation study included generation of a new survey instrument (the Theory of Planned Behavior for Inclusion, TPBI) based upon the theory of planned behavior. Before conclusions can be drawn from the survey's administration, the instrument must be analyzed for reliability and validity to ensure the results are true.

The TPBI is divided into four constructs: a) behavioral beliefs (attitude toward the behavior), b) normative beliefs (subjective norm), c) control beliefs (perceived behavioral

control), and d) generalized statements of intent. Demographic data is collected as a fifth construct but only as a means for providing background information. The first three constructs are subdivided into two sections each: one that directly measures beliefs, and one that utilizes indirect statements to measure belief. Quantitative analysis of the survey items indicates the following about the TPBI, developed specifically for this study: 1) demographic questions should ask specific class status (e.g. freshman, sophomore) rather than hours of coursework, 2) the demographic item regarding practicum hours should be revised for clarity of the term *hours*, 3) items in the behavioral beliefs construct work well together to capture overall attitude toward inclusive environments, 4) items in the PBC construct have moderate convergent validity and high discriminant validity, 5) the two items dropped from analysis in the direct measure of subjective norms (items 31 and 34) should be rewritten in order to aid in reliability measures rather than hindering them, 6) items indirectly measuring subjective norms construct need rewriting to consider other, stronger societal influences. This construct scored low on both convergent and discriminant validity. 7) Predictive validity of the constructs working together is strong (adjusted $R^2 = 0.472$).

A Review of Findings

A summary of findings from the data analysis in chapter four is presented in table

5.1. This section will discuss findings for each research question in detail.

Table 5.1. A summary of findings by research question

<p>1) What are preservice teacher attitudes, beliefs, and intentions toward the inclusion of students with disabilities in a predominately general education environment?</p> <ul style="list-style-type: none"> • preservice teachers generally have positive attitudes toward inclusion • preservice teachers generally receive positive social pressures regarding inclusive environments • preservice teachers are more concerned about the benefit to general education students than the benefit to students with a learning disability • the benefit to students with a learning disability is the greatest behavioral predictor of intent to work in an inclusive setting • preservice teachers generally feel they have the skills and resources to teach in an inclusive environment** • preservice teachers have low confidence in their ability to use research-based initiatives in the inclusive classroom** • preservice teachers in general, when offered a position in an inclusive educational environment, will likely take the job • behavioral beliefs are the greatest predictor of intent to accept a position in an inclusive classroom • the theory of planned behavior did not significantly improve the prediction of intent to teach in an inclusive classroom setting
<p>2) What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?</p> <ul style="list-style-type: none"> • there is no significant difference in attitude amongst freshmen, sophomores, juniors, and seniors • student teaching status is not a differentiating factor for attitudes
<p>3) How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?</p> <ul style="list-style-type: none"> • no significant difference in overall attitude across certification areas • preservice teachers in special education have a higher perception of behavioral control than those in elementary or secondary education • no significant difference in attitude for male and female respondents; however demographics of study may affect this finding

** not linked to intent

Focus Question.

What are preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment?

Prior to beginning the study, the researcher hypothesized that preservice teacher attitudes would be positive. Data from this study support the hypothesis; mean values for the direct measures were above three on the Likert scale, and mean values for the weighted indirect measures were above zero. A breakdown of the mean values for each survey construct for general beliefs (direct measures) reveals that the most positive mean values are found in the behavioral beliefs index. This means that preservice teachers responded favorably to the following descriptors of inclusion: good practice, the right thing to do, pleasant, and beneficial. Mean values associated with these descriptors were higher than mean values for social pressures and perceived control of factors in the inclusive environment. Analysis of normative items reveals that preservice teachers generally receive positive social pressures regarding inclusive environments. However, data from items asking about specific normative referents indicate that these items do not tap into the subjective norms construct. In fact, they overlap with other, irrelevant

constructs. Therefore, while we know that this sample receives positive social pressures, we cannot indicate which group holds the most or least influence.

Preservice teachers in this study rate more concern for the benefit (academic or social, non-specific) received by general education students than concern for the benefit received by students with a learning disability. Even though they are most concerned about the benefit to the general education student, it is the benefit to the students with disabilities that is the greatest behavioral predictor of a preservice teacher's intent to accept a position in an inclusive classroom.

Though preservice teachers generally feel they have the skills and resources required of the inclusive setting, they report lowest scores in the use of research-based initiatives in the classroom. This was the only skill that scored in the negative range. However, these skill perceptions do not aid or hinder their intention to work in the inclusive environment. The factor that most influences a preservice teacher's intention to work in an inclusive setting is his/ her general beliefs about inclusion, including the benefit to students. These behavioral beliefs were high amongst survey participants, therefore it makes sense that respondents also indicated they would likely accept a position in an inclusive classroom if offered.

The role of theory in this survey is of utmost importance. Theory was the foundation for formation of the survey instrument, its analysis, and conclusions of the study. The PBC component is the differentiating factor between the theory of reasoned action and the theory of planned behavior. One's perception of how easy or difficult it will be to perform a behavior (e.g. teaching in an inclusive classroom setting) influences the likelihood that they will perform the behavior (intent). However, in this study, data indicate that the addition of perceptions does not change preservice teacher intentions. This means that the intention of this sample of preservice teachers to accept a position in an inclusive classroom does not change when considering the skills necessary for the job. Whether or not a preservice teacher can use research- based methods, assess using progress monitoring, implement IEP provisions, and collaborate with service providers does not impact their intent to accept a teaching position in an inclusive classroom. What may be of most importance here is not the fact that the PBC does not increase intent, but that it does not decrease it. Though more is expected of the teacher in an inclusive setting, the set of skills in this survey construct don't deter a preservice teacher from accepting an inclusive teaching position. While the addition of the PBC construct doesn't strongly

improve upon the prediction of intentions, the predictive validity of the instrument as a whole is relatively strong (adjusted $R^2 = 0.472$).

Links to literature. The hypothesis for this question was based on previous research in which data indicates preservice teachers hold generally positive attitudes toward inclusion (Avramindis et al., 2000; Jobling & Moni, 2004; Shade & Stewart, 2001; Shippen et al., 2005; Silverman, 2007). Even though no study was found that researched preservice teacher attitudes using the theory of planned behavior, some findings are echoed in the literature. The studies by Romi & Leyser (2006) and Lambe & Bones (2006) found preservice teachers to be supportive of inclusion philosophy while still reporting self-efficacy concerns. Like these studies, mean scores of respondents in this dissertation study hover just above neutral, especially for specific normative and PBC items, indicating that they are generally positive, though the gap between the mean score and the end of the positive attitude spectrum shows they are not elated about inclusive environments. This dissertation study found that preservice teachers are more concerned about the benefit of an inclusion program to general education students than the benefit to students with a learning disability. This finding is similar to studies in the field that found teachers may believe that inclusive environments are unfair to the general

education student (Garriott, Miller, & Snyder, 2003; McClesky, Waldron, So, Swanson, & Loveland, 2001). Like Van Reusen, Shoho, and Barker (2000), this study found indication of concern over the benefit to students without disabilities; the interesting twist here is that though the preservice teacher respondents are concerned about the general education student, it is the benefit to students with a disability that may bring preservice teachers to the inclusion classroom. This desire to help students with disabilities is common among preservice teachers (Tait & Purdie, 2000), and plays a role in attracting preservice teachers to the field of special education (Gentry & Wen, 1988).

Attitude scores from this study are consistent with that of other studies of preservice teachers (Avramindis et al., 2000; Jobling & Moni, 2004; Shade & Stewart, 2001; Shippen et al., 2005; Silverman, 2007), but they disagree with findings of studies using teachers in the field. Inservice teacher attitudes toward inclusive educational environments have been cautious and in some cases downright negative for many years. For example, Bradfield (1973) found that teachers remained cautious and even somewhat more negative about the inclusion of three students with educable mental retardation in a third grade classroom. After the passing of PL94-142, requiring a free, appropriate public education for all students, teachers remained resistant to inclusion; some even wanted

pull out programs extended. The study by Coates (1989) reveals a desire by general educators to expand programs that remove students with disabilities from the general classroom for part of the day. Though educators want to improve the learning situation for students with disabilities (Gickling & Theobald, 1975), general education teachers in the 1980's want someone else to do it (Coates). With the passing of IDEA, attitudes of the 1990's appear less negative, though teachers continue to express concerns over preparedness to teach students with disabilities, time to teach sufficiently, and available resources and support personnel (Barton, 1992; Houck & Rogers, 1994; Janney et al., 1995; Minke et al., 1996; T. V. Semmel et al., 1991). The year 2001 brought new challenges to the world of special education. No Child Left Behind requires instruction via scientifically based methodologies with the goal that all students will be proficient in reading and math by the year 2013-2014. Due to the repercussions of high-stakes testing, teachers are required to teach a wider breadth of content and are allowed less and less time for remediation of skills.

Research from the year 2000 forward suggests educators in this decade continue to express anxieties about inclusion (Shippen et al., 2005; Silverman, 2007); most concerns are due to a low confidence in their abilities to meet the needs of students with

disabilities (Andrews & Clementson, 1997; Bouck, 2005; Center & Ward, 1987; McCray, 2004; Scruggs & Mastropieri, 1996; Vaughn, Schumm, Jallad, Slusher, & Saumell, 1996). Many studies found that preservice teachers, like teachers in the field, are concerned about their ability to meet the needs of diverse learners (Bishop & Jones, 2003; Fisher et al., 2003; Henning & Mitchell, 2002; Lesar, Benner, Habel, & Coleman, 1997; Levin, Hibbard, & Rock, 2002; Scruggs & Mastropieri, 1996; Silverman, 2007; Tait & Purdie, 2000). Yet, this study found that preservice teachers generally feel they have the skills and resources necessary for teaching in an inclusion classroom. According to the theory of planned behavior, one may hold general positive beliefs about a behavior, yet maintain specific beliefs that are negative. This study found that even though preservice teachers are generally positive about their skill set and available resources, they report concern or lowest confidence in a crucial area of instruction: the use of research based methodologies. Other studies of preservice teacher attitudes use a different design to assess attitudes; those grounded in theory did not allow for differing general and specific beliefs. The researcher found no studies reporting a high self-efficacy for preservice teachers in instruction and methods; however, two previous studies found preservice teachers to be “comfortable with not having all the answers” to classroom

issues (Elizabeth Bondy & Brownell, 2004; Harriman & Renew, 1996; Silverman, 2007).

Bondy & Brownell suggest that even though some researchers have been successful collaborating and experiencing effective classroom interventions, the gap between research and practice continues to exist. Harriman & Renew suggest this gap could be minimized if preservice teachers study under a building administrator rather than a college-based professor; the student's perception of professor credibility was a factor in their research. The finding from this dissertation study that preservice teachers generally receive positive social pressures, most influenced by professors, regarding inclusive environments echoes a previous finding that preservice teachers were influenced by course instructors on dispositions toward the inclusive classroom (Harriman & Renew, 1996). A more recent study found that university student beliefs were most influenced by teachers and family members, though this study did not use the theory of planned behavior to make this determination (Walsh et al., 2008).

The finding that general beliefs about inclusion are the greatest predictor of intent is consistent with a dissertation study in the late 1990's that utilizes the theory of planned behavior. Marino- Driscoll (1997) used the theory to measure inservice teacher willingness to teach a special needs child in a regular education classroom. She found

that behavioral beliefs were the strongest predictor of intent to volunteer to teach a child with EMR, with values higher than subjective norms or PBC (Marino- Driscoll, 1997). Other studies using the theory of planned behavior in the field of education also found attitude or behavioral beliefs to be the strongest predictor of intentions (Mummery, Spence, & Hudec, 2000).

This study found that the addition of the PBC component did not significantly improve the prediction of intent to teach in an inclusive setting. Low influence from preservice teacher perceptions of their skills and resources on intent may be found in the scale itself. “The relative importance of attitude, subjective norm, and perceived behavioral control in the prediction of intention is expected to vary across behaviors and situations” (Ajzen, 1991). The perceived behavioral control component may be less influential in situations where attitude or subjective norms are strong (Armitage & Conner, 2001). Therefore, the low influence of the PBC component in this study may be due to the stronger set of behavioral beliefs present in the preservice teacher. Ajzen also notes that the addition of PBC should become increasingly more predictive of behavior as volitional control over behavior decreases. This indicates that due to the low predictability of the PBC component alone in the current study, it is possible that

preservice teachers have a high volitional control over the kind of classroom in which they will teach. In other words, there may be little to impede the decision making process; when provided an offer to teach in an inclusive classroom, there may be no personal or environmental barriers to keep preservice teachers from accepting the position. This study is an example of the ceiling effect in the theory of planned behavior: because accepting a position to teach in an inclusive classroom is relatively straightforward, extra efforts to engage in the behavior are not likely to impact whether or not a teaching position is accepted once offered (Armitage & Conner, 2001). Therefore, it is not surprising that preservice teachers in this study responded that when offered a position in an inclusive educational environment, they would likely take the job.

Subquestions

2. What attitudes/ beliefs are strongly represented by preservice teachers at different stages of their undergraduate coursework?

The researcher predicted positive attitudes toward persons with disabilities from study participants who have had more hours of coursework, and more negative attitudes from those who have had limited coursework experiences (Avramindis & Norwich, 2002; Hanrahan & Rapagna, 1987a, 1987b). However, data from this study indicates that there

is no significant difference amongst freshmen, sophomore, junior, and senior survey respondents regarding attitudes toward an inclusive environment. Because class distinctions were interpreted and not specifically asked, the researcher also used student teaching as a factor of experience. Attitudes toward inclusive environments were not different between preservice teachers who had begun their student teaching component and those who had not.

Links to literature. Previous studies are mixed in the consideration of experience or student class status as a determining factor for preservice teacher attitudes. For example, Lamb & Bones (2008) surveyed post-graduate students and found that experience in the field would decrease preservice teachers' attitude. Though this attitude could be attributed to differences in the age of the sample participants. An Australian study of 274 general education preservice teachers found that the student teaching experience improved attitudes toward inclusion (Campbell, Gilmore, & Cuskelly, 2003). In contrast, a study of 181 pre-service teachers enrolled in a curriculum infusion teacher preparation program found no significant differences in attitude toward inclusion across student class standings (Cook, 2002). Shippen et al. (2005) found no attitude differences between undergraduate and graduate level students in their study of 326 students at universities in

the southeastern and mid-Atlantic United States. Silverman (2007) found no response differences across undergraduate or graduate class status nor were there differences in attitudes according to the level of experience with young people. These mixed findings from previous studies indicate that experience and class status need further research as potential factors influencing preservice teacher attitudes toward inclusion. The possibility exists that factors influencing attitudes could be specific to each institution, and further research may clarify the relationship.

3. How do the attitudes of student subgroups compare with each other: elementary vs. secondary, special education vs. general education, male vs. female?

The researcher hypothesized that elementary preservice teachers would have more positive attitudes than do secondary preservice teachers (McHatton & McCray, 2007; Scruggs & Mastropieri, 1996; T. V. Semmel et al., 1991). Based on prior research, the researcher also predicted the following to occur: special education majors would have more positive attitudes than general education majors (Barton, 1992; Scruggs & Mastropieri, 1996; T. V. Semmel et al., 1991), and females would have more positive attitudes than males (Avramindis & Norwich, 2002). It was found that overall attitude was not significantly different across certification areas, though preservice teachers in

special education have a higher perception of behavioral control than those seeking certification in elementary or secondary education. No significant difference in overall attitude was found between male and female respondents.

Links to literature. This dissertation study found no significant differences in overall attitude across certification area. This finding is not in concert with previous studies. For example, Romi & Leyser (2006) found that preservice teachers in special education had higher self-efficacy and therefore responded more favorably to inclusion than did general education preservice teachers. In the study by Shippen et al. (2005), future general educators felt more anxieties about including students with disabilities in the general education classroom compared to the anxieties of future special educators. Research using practicing teachers as participants also indicates a difference in attitude among special and general educators. Barton's 1992 study of inservice teachers in the Chicago area also demonstrates present anxieties about abilities for teaching in a mainstreamed classroom and the desire for assistance from the special education teacher. A study from the 1970s indicates the percentage of elementary and secondary teachers who would be willing to accept a student with disabilities into their classroom was similar: 65% elementary and 58% secondary (Gickling & Theobald, 1975). Another study found that

teachers with more coursework reported more positive attitudes toward inclusion (Bender, Vail, & Scott, 1995). A meta analysis of teacher attitudes by Scruggs and Mastropieri (1996) indicates that teacher acceptance of students with special needs has to do with classroom concerns, an area which can vary across classroom type and thus certification area. Most recently, a paper presented at the Northeastern Educational Research Association reported students majoring in exceptionalities had more positive attitudes than did general education majors (Walsh et al., 2008).

Though overall attitude did not result in a significant difference, this study found preservice teachers in special education have a higher perception of behavioral control than those in elementary or secondary education. This could mean that students majoring in special education are well versed in the skills necessary to teach in an inclusion classroom. Too often, teachers in certification programs for elementary or secondary education receive only one class in exceptionalities (Fender & Fiedler, 1990; Kearney & Durand, 1992). Content of one collegiate course cannot sufficiently prepare educators in the skills necessary to teach a class of diverse learners (Kirk, 1998; Simpton, Whelan, & Zabel, 1993). The emergence of dual certification programs aids in better preparation for future general educators to meet the needs of diverse classrooms. A dissertation study of

teacher preparation programs found that preservice teachers from combined programs have more positive attitudes towards inclusion and use significantly more categories of instructional adaptations to include students with disabilities in their lessons (Kim, 2006).

The finding that male and female respondents may not differ in attitude towards inclusion is both supported and refuted in the literature. Several studies found that females indicated more positive attitudes than do males (Aksamit, Morris, & Leunberger, 1987; Eichinger, Rizzo, & Sirontnik, 1991; Thomas, 1985). Tait and Purdie (2000) studied 1,626 preservice teachers in Australia and found that females are more likely than males to have sympathies toward students with disabilities. However, some studies support the gender finding of this research (Beh-Pajooh, 1992; Berryman, 1989; Hannah, 1988; Jamieson, 1984; Leyser, Kapperman, & Keller, 1994). Alghazo, Dodeen, and Algaryouti's study of Arab preservice teachers in Jordan found no significant differences between male and female respondents in their attitude toward inclusion (Alghazo et al., 2003). Inconsistencies regarding the influence of gender on attitudes are prevalent in both preservice and inservice teacher research; further study is warranted in this area.

Conclusions

Three conclusions were made based on findings from this dissertation study. They are listed here but discussed in detail in the following paragraphs. (1) Programs of higher education are succeeding in their mission to graduate citizens with a sensitivity for the problems of others, committed to the betterment of society. (2) Programs of higher education need to evaluate the ways in which research- based practices are taught. (3) Preservice teachers may believe they have complete volitional control over factors within the inclusive environment.

Conclusion No. 1: Programs of higher education are succeeding in their mission to graduate citizens with sensitivity for the problems of others, committed to the betterment of society.

Preservice teachers in this dissertation study report positive attitudes toward the concept of inclusion. Specifically, they are motivated by their desires to help students with disabilities experience success by benefiting from the inclusive classroom. When asked if they would do extra work for the benefit of their students, preservice teachers report that they would likely put forth the additional efforts. These findings capture the sort of civic mindset which institutions of higher education aim to foster.

Conclusion No. 2: Programs of higher education need to evaluate the ways in which research based practices are taught.

Teachers of inclusive classrooms are under more pressure than ever before.

NCLB states that all students will be proficient in reading and math by the year 2013-2014. Annual yearly progress goals must be met or schools could suffer a hierarchy of consequences culminating with possible government takeover. Teacher preparation programs must consider how they prepare teachers to meet the needs of diverse learners while at the same time meet the requirements of AYP. The use of research- based methods for instruction is a requirement of legislation, but they are also a necessary foundation for instruction to provide students with disabilities a quality education. The Task Force on Quality Indicators for Special Education Research, formed in 2004 by the Council for Exceptional Children, states that high quality research should “separate the wheat from the chaff,” contributing to the quality of life for students with disabilities and their families (Odom et al., 2004). This study found that preservice teachers are most uneasy about using research- based practices in the classroom. Specific responses indicate that these preservice teachers feel research- based practices are likely difficult to implement; these future teachers indicate they are only slightly positive (0.64 on a scale of -2 to +2) about the likelihood that they will use these practices in the classroom. The interaction of these responses indicates that preservice teachers appear complacent about

the use of research- based practices in the classroom (a score of 1.4 on a scale of -10 to +10). This finding should alarm institutions of higher education. If preservice teachers are unconcerned about research- based practices and only somewhat likely to use them in the classroom, what does that mean for instruction of students with disabilities? What does that mean for students who do not qualify for services, yet desperately need instruction to close their achievement gap? The aims of NCLB are lofty, but well- intentioned. Schools may find it difficult to bring all students to proficiency, but the aim of educators should be to get as close as possible to proficiency for every child. There is a disconnect between the positive attitudes indicated by this study and the near neutral beliefs on research- based practices. Is this term being tossed about so much that universities assume understanding without ensuring students have knowledge of instructional skills that qualify? Do preservice teachers lack the understanding that the use of research- based methodologies is necessary for the success of students with disabilities? The findings indicate that preservice teachers are drawn to inclusive classrooms by the desire to make them benefit the student with disabilities while still meeting the needs of their non- disabled peers. Yet, there appears to be complacency about the provision of quality instructional program. Schools of higher education need to evaluate the way in which

they are instructing preservice teachers in research-based practices and plan a more effective means of training future teachers in the methods identified as research-based.

Conclusion No. 3: Preservice teachers may believe they have complete volitional control over factors within the inclusive environment.

Beck and Ajzen (1991) note that TPB deals with the perception of control rather than actual behavioral control. Perceptions of behavioral control can only lead to behavior when there is agreement between perception and actual control. There exist situations in which PBC adds little to the prediction of behavior. In the case where an individual has little information about the behavior, or when new and unfamiliar elements enter the situation, or when requirements or available resources have changed, data may show a measure of PBC that does not add to behavioral prediction. In this study, the addition of the construct measuring perceived behavioral control did not increase the prediction of intent as indicated by the behavioral and normative beliefs constructs alone. A definitive claim for the reasoning behind this effect cannot be made; however, four possibilities exist. One or more of the following could be present for the preservice teachers participating in this study: (1) Preservice teachers' knowledge of the four topics addressed by the PBC construct (progress monitoring, implementation of IEP provisions,

research- based methodologies, and collaboration with other service providers), is limited, (2) requirements for successful instruction in the inclusion classroom have changed, (3) available resources for the preservice teacher have changed, or (4) unfamiliar elements have entered the decision making situation. It is possible that preservice teachers who participated in this study were not knowledgeable of the topics under the PBC construct. It is also possible that preservice teachers may have knowledge of the skills/ activities, yet did not consider their use might be required of their future teaching position.

No matter what factor causes the lack of value added by the PBC construct in this study, the presence of this finding indicates the possibility that preservice teachers may believe themselves to have volitional control over factors within the inclusive environment. This conclusion is made based on theoretical evidence. Ajzen (1991) explains that where there is a high volition of control, behavioral beliefs should be the only predictor of behavior. In this study, behavioral beliefs were the greatest predictor of intention (Beta = .432). This finding combined with the low value added by PBC and validity problems within the items measuring subjective norms lead the researcher to believe there is a possibility that Ajzen's reasoning applies to this situation. If preservice

teachers believe themselves to have high volitional control over factors within the inclusive environment, potential issues arise. Are universities leading preservice teachers to believe they have a choice to use progress monitoring or research- based practices? This choice should not be a straightforward decision. The consequences of using or not using these practices have implications for students within the classroom.

One study cannot make the claim that preservice teachers believe they have complete volitional control over factors in the inclusive classroom. Therefore, this conclusion warrants additional research using TBP to assess attitudes of preservice teachers toward inclusion.

Limitations

This dissertation study included the development of a survey instrument based on the theory of planned behavior. The ability to assess true reliability of the instrument is limited because this is the first time it has been used. Also, low validity of the subjective norms construct limits the validity of the research findings. Higher measures of convergent and discriminant validity may have been obtained if the items tapping subjective norms were written broadly, e.g. if they measured both descriptive and moral norms. Topics for inclusion in the constructs of subjective norms and PBC were selected

based on occurrence in the literature. If the researcher had used qualitative means to determine statements for these constructs, scores of validity would likely improve.

The convenience sample for this study includes preservice teachers from select public universities in South Carolina. Generalizability of findings to preservice teachers in other geographic areas or at private schools is cautioned.

The results of this study are dependent upon candid responses in self-reporting. Such methods for data collection are vulnerable to personal bias- the respondent's view of his or her own belief system. If there is bias within this metacognition, the data will be tainted and thus less reliable and valid (Armitage & Conner, 2001; Gaes, Kalle, & Tedeschi, 1978). There also exists potential for espoused beliefs and actual beliefs to differ. However, it is interesting to note that self-reporting was found to be superior to observed behavior reporting in predicting intentions (Armitage & Conner, 2001).

The use of the theory of planned behavior may be a limitation in itself. Ajzen believes the use of PBC and self-efficacy to be one and the same (Ajzen, 1991), but other researchers disagree (de Vries, Dijkstra, & Kuhlman, 1988; Dzewaltowski, Noble, & Shaw, 1990). The difference between self-efficacy and PBC is that the former is a cognitive perception of control and is based on internal factors. PBC is reflective of

external, more general factors (Armitage & Conner, 2001). Items included in the PBC construct for this study were written to capture perceptions of external factors that may influence attitude; however, the possibility of a respondent answering items based upon self-efficacy of the subject (e.g. their understanding of progress monitoring rather than the choice to use it as an evaluative tool) may limit the validity of these findings. The use of TPB may also influence the assumption of direct behavioral control. It is important to keep in mind that the perception of behavioral control can only be accurate when it is in agreement with actual behavioral control (Beck & Ajzen, 1991).

Within this dissertation study, several hypotheses were tested. If the same alpha level is used for each test, the experiment-wise error rate increases. The experiment-wise error rate is a result of the increased probability of Type I error (Love, 1988). In other words, the high number of statistical tests included in the analysis of data causes an increased probability that at least one false rejection of the null hypothesis occurred over the entire experiment. A total of 47 statistical tests were run in this dissertation study: four reliability analyses, seven MANOVAs, 33 correlations, and three T tests. Therefore, any reported p value < 0.01 may claim a difference when there is no such difference.

Implications for higher education

This study has attempted to elucidate the relationship between legislative mandates in education and teacher attitudes. As policy makers continue to have a say in the field of education, the attitude of teachers will need to be measured in order to view the potential for actualizing political intent. Teacher attitude is one of the most important predictors of a successful inclusion program (Alghazo et al., 2003; Coates, 1989).

Therefore, it holds true that preservice teacher attitude is also important.

Contrary to literature that portrays preservice teachers and inservice teachers to be of like mind- cautious and highly anxious about inclusive settings, the current study found preservice teachers to be positive about inclusion. This finding indicates that legislation such as NCLB and IDEIA, which put pressure on teachers to raise test scores, do not have as much an effect of preservice teachers as they do teachers currently in the field. In fact, there is a possibility of support for this legislation from preservice teachers who have positive attitudes.

Teacher attitudes toward inclusive environments have improved somewhat from the 1960's to the present day; however, studies from the year 2001 (the year of NCLB) forward indicate teacher attitudes remain cautious (Bishop & Jones, 2003; DeSimone &

Parmar, 2006; Fisher et al., 2003; Henning & Mitchell, 2002; Levin et al., 2002). For legislation to become real and meaningful, teachers must embrace mandates and foster communities of learning for all students regardless of disability (McHatton & McCray, 2007). Even though the preservice teachers in this study hold positive attitudes toward inclusion, once they enter the profession they may be influenced by inservice teachers who hold different beliefs. Wilczenski (1993) found that preservice teacher attitudes decline as they enter to field. Findings from this dissertation study combined with cited literature lead the researcher to conclude that legislative mandates may be favored by preservice teachers, but their intent may not be actualized in the classroom. In other words, while practicing teachers hold cautious or negative beliefs about the practice of inclusion, barriers for students with disabilities to experience full participation in the general education environment remain. While barriers remain present, students with disabilities are limited in their ability to maximize full potential and experience success.

This study found that preservice teachers are moderately positive about inclusion. While this is a promising finding, it is contrary to many studies that found preservice teachers to be anxious about teaching in an inclusive setting. Preservice teacher attitudes toward inclusion provide the lens through which these future educators assimilate new

information, including the use of research- based instructional methods. Use of an instrument that utilizes the Theory of Planned Behavior would be beneficial to teacher preparation programs because it would provide insight into present beliefs and groups influential in shaping and/ or reinforcing these beliefs. For example, if attitudes are found to be neutral or negative and professors are found to be a highly influential social group the school can then develop an action plan to graduate future teachers who are civic minded with a strong sensitivity for others. Therefore, universities should consider preservice teacher attitudes toward inclusive environments in order to determine areas of needed reform for teacher preparation programs.

Findings from this study regarding preservice teachers' negative feelings about the use research- based practices calls for school of higher education to evaluate the way in which they prepare future educators. Universities need to consider restructuring the way in which information is presented to teacher candidates and provide ample opportunity for practice with research- based methodologies.

Finally, institutions of higher education should consider following in the footsteps of those offering dual certification programs, e.g. elementary and special education certification. A combined approach would likely foster and inclusive rather than an

integrated mindset. Many negative attitudes are described in the literature as stemming from feelings of being unprepared to teach a diverse set of learners. Responsibility for this preparation falls on the shoulders of the teacher preparation programs, therefore expanding programs to include instruction in special education initiatives would likely improve attitudes in this area.

Future Research

This study's finding of positive attitudes toward the general concept of inclusion indicates a possible disconnect between attitudes of preservice teachers and those teachers already in the field of education. Preservice teacher attitudes have been found to decline as they enter the field (Wilczenski, 1993). Are preservice teachers unreasonably optimistic about inclusion? What factors are involved in changing the positive preservice teacher attitude into a cautious, and in many cases, negative attitude? Are institutions of higher education preparing teachers for the reality of inclusion or setting them up for disappointment?

This study found preservice teacher attitudes to be positive, thus potentially supporting legislative mandates, e.g. NCLB and IDEIA. However, this finding differed from other studies that found preservice teachers to be anxious about inclusion. With the

increased pressures on teachers by high stakes testing and meeting AYP goals, questions arise about the influence of legislation on preservice teacher attitudes. Does legislation have an effect upon preservice teacher attitudes? If so, does legislation change the intention of preservice teachers to work in inclusive environments? Further research can consider the affects of future legislation on preservice teacher intentions. Attrition is a growing problem in the field of education, with 46% leaving the field in the first five years (Boe, Cook, & Sunderland, 2008). As the law continues to dictate educational policy, will the intentions of preservice teachers change? What will be the attitudes of preservice teachers toward the concept of inclusion as more pressures are placed on the general education teacher?

There are a small number of published studies in the past decade that consider the theory of perceived behavioral control in the educational setting. There are even fewer in the area of special education. Those in the field of special education include perceptions of students toward subject matter achievement (Dinner, 2009), student perceptions toward other student groups (Roberts & Smith, 1999), teachers perceptions of teaching certain curricular subjects (Aerni, 2008; Burak, 1992), and teacher perceptions toward types of students (Conaster, Block, & Gansneder, 2002; Conatser, 1999; Lasley, 2006).

Only a handful of studies were found that used the theory of planned behavior with the inclusion model (Kuyini & Desai, 2007; Marino- Driscoll, 1997; Morley, 2005), but none of those focused on preservice teachers. Future research should include preservice teachers as the target demographic for studies using the theory of planned behavior and special education topics.

Summary

This study aimed to identify preservice teacher beliefs, attitudes, and intentions toward the inclusion of students with disabilities in a predominately general education environment. A survey instrument was created based on Ajzen and Fishbein's theory of planned behavior and disseminated to three universities in South Carolina. This study improves upon existing studies of preservice teacher attitudes because it takes place at more than one institution and is grounded in a theory that explores the many- layered aspects of attitude.

Preservice teacher attitudes were moderately positive on all measures: behavioral beliefs, subjective norms, and perceived behavioral control. Specific responses describe an altruistic and civic- minded group of future educators. Respondents indicated a near

neutral attitude toward research- based practices. Interaction of scores for ease of use and likelihood of use for research- based practices was also near neutral.

Three conclusions were drawn from the findings of this study. (1) Programs of higher education are succeeding in their mission to graduate citizens with a sensitivity for the problems of others, committed to the betterment of society. (2) Programs of higher education need to evaluate the ways in which research- based practices are taught. (3) Preservice teachers may believe they have complete volitional control over factors within the inclusive environment.

Appendices

Appendix A: IRB Approval

From: RALLEY@exchange.clemson.edu

Subject: Validation of IRB protocol # IRB2009-028, entitled "Preservice Teacher Attitudes and Intentions Toward an Inclusive Educational Environment"

Date: February 12, 2009 1:08:51 PM EST

To: PJR146@exchange.clemson.edu, juliejones@gmail.com

Dear Paul and Julie,

The Chair of the Clemson University Institutional Review Board (IRB) validated the protocol identified above using Exempt review procedures and a determination was made on **February 12, 2009**, that the proposed activities involving human participants qualify as Exempt from continuing review under **Category B2**, based on the Federal Regulations (45 CFR 46). You may begin this study.

Please remember that no change in this research protocol can be initiated without prior review by the IRB. Any unanticipated problems involving risks to subjects, complications, and/or any adverse events must be reported to the Office of Research Compliance (ORC) immediately. You are requested to notify the ORC when your study is completed or terminated.

Attached are documents developed by Clemson University regarding the responsibilities of Principal Investigators and Research Team Members. Please be sure these are distributed to all appropriate parties.

Good luck with your study and please feel free to contact us if you have any questions. Please use the IRB number and title in all communications regarding this study.

Sincerely,
Becca

Rebecca L. Alley, J.D.
IRB Coordinator
Office of Research Compliance
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Office Phone: 864-656-0636
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Appendix B: Administration Invitation Letter

April 8, 2009

Dear administrator:

Your school is invited to take part in a research study conducted by Julie Jones and Paul Riccomini, PhD. The purpose of this study is to obtain information that will aid understanding of factors surrounding 'inclusion' and how the undergraduate preservice teacher believes the education of students with special needs placed in his/her classroom can be maximised. Preservice teachers are underrepresented in studies such as these. Therefore, while participation is completely voluntary, it is important that your students' views are included to have a thorough investigation of pre-service teachers' attitudes toward inclusion. Data reporting will not include names of specific institutions; results will be discussed as *institutions in the south*. However, upon request of individual schools, data specific to your institution can be provided to aid in program development and improvement. To participate in this study, the contact person at your school will be provided with a web link to be distributed to your undergraduate students enrolled in the College of Education. These students will be invited to take a short survey with personal anonymity guaranteed. We hope you will take the opportunity to help add to the literature base and improve teacher education for southern schools. If you have any questions, feel free to contact us.

Thank you for your consideration,

Julie P. Jones
Clemson University
864-585-5188

Paul J. Riccomini, PhD
Clemson University
864-656- 5992

Appendix C: TPBI Constructs

Attitude									Intent
Behavioral Beliefs (Attitude toward the behavior)			Normative beliefs (Subjective Norm)			Control Beliefs (Perceived Behavioral Control)			Generalized statements
(Indirect) Behavioral Belief	(Indirect) Outcome Evaluation	(Direct) Behavioral Belief	(Indirect) Normative Belief	(Indirect) Motivation to Comply	(Direct) Normative Belief	(Indirect) Strength of Control Belief	(Indirect) Power to Influence	(Direct) PBC	
3- Inclusion beneficial for students with academic learning disabilities.	9- Doing something positive for students with academic LD is...	17- Overall, I think the inclusion of... is harmful--beneficial	13- Teachers in the field think inclusion ...	21- Doing what teachers in the field do is...	29- People who are important to me think inclusive educational settings are beneficial for students with academic LD	5- Progress Monitoring	25- I am (more/less) likely to use PM in my classroom.	33- I will have the resources needed to use/ implement PM.	37- I expect to teach in an inclusive educational environment.
2- It causes a lot of worry and concern for the student with academic LD if they are placed in ...	10- Worry and concern for the student with academic LD is desirable—undesirable	18- pleasant --- unpleasant	14- My professors would Approve—disapprove of...	22- Doing what my professors thinks I should do is...	34- I feel social pressure to....	6- IEP implementation	26- I am (more/less) likely to implement IEP provisions in my classroom.	36- I feel capable of implementing IEP provisions in my classroom.	38- I want to teach students with different levels of ability.
8- Inclusion benefit for general education students.	11- Doing something positive for students w/o academic LD is...	19- The wrong thing to do—the right thing...	15- My future students...	23- The approval of my students is...	31- It is expected of me that I...	7- Research Based Practices	27- I am (more/less) likely to use research based practices...	35- Programs or training will be available so I can continue to learn about RBP	32- I intend to teach in an inclusive educational environment.
4- Inclusion requires more work for the teacher.	12- Doing extra work for the benefit of the students is...	20- Good practice- bad practice	16- Preservice teachers like me...	24- The approval of my peers is...	39- Most people who are important to me... promotes acceptance of differences...	1- collaborating professionally with other service providers	28- I am (more/less) likely to collaborate with other professionals on the education of my students.	30- I have control over collaboration with other professionals to make decisions about students.	40-If you are offered a teaching position in an inclusive educational environment, how likely are you to accept the job? (likely/unlikely)

Appendix D: TPBI Full Survey

Dear student,

The purpose of this questionnaire is to obtain information that will aid understanding of factors surrounding 'inclusion' and how the preservice teacher believes the education of students with special needs placed in his/her classroom can be maximised. Preservice teachers are underrepresented in studies such as these. Therefore, while your participation is completely voluntary, it is vital that your views are included to have a thorough investigation of pre-service teachers' attitudes toward inclusion. The questionnaire is designed to be anonymous, and there is no intent to identify individual students or student views. There are no known risks associated with this research. Please provide the information required based on your extensive school based work.

Thank you for your cooperation,

Julie P. Jones, Clemson University

864-585-5188

Section I: Demographics

Please complete or circle your response to the following items:

A. Gender: M F

B. Age: _____

C. Please indicate your intended certification area:

Early Childhood

Elementary

Secondary

Special

D. Does anyone in your family have a disability?

Yes

No

E. Do you have prior experience interacting with persons who have a disability?

Yes

No

F. How many hours of coursework have you completed in your degree program?

G. Have you completed a practicum requiring at least _____ hours in the classroom?

H. Have you begun your student teaching component?

I. Indicate the institution at which you are currently enrolled:

Section II: Each question in this section refers to the inclusion of students with academic learning disabilities in a predominately general education environment.

1	I am confident that I can collaborate professionally with other service providers (e.g. speech therapists, guidance counselors).	Strongly Disagree	1	2	3	4	5	Strongly Agree
2	It causes a lot of worry and concern for the student with academic learning disabilities if they are placed in an inclusive educational environment.	Likely	1	2	3	4	5	Unlikely
3	Inclusive educational environments are beneficial for students with academic learning disabilities.	Strongly Disagree	1	2	3	4	5	Strongly Agree
4	Inclusive educational environments require extra work on the part of the teacher.	Likely	1	2	3	4	5	Unlikely
5	Progress monitoring is an accurate means of gathering information on student learning.	Unlikely	1	2	3	4	5	Likely
6	I feel pressure when I am working with students who have IEP accommodations or modifications.	Unlikely	1	2	3	4	5	Likely
7	Research based practices are often difficult to implement in the classroom	Unlikely	1	2	3	4	5	Likely
8	Inclusive educational environments are beneficial for general education students.	Strongly Disagree	1	2	3	4	5	Strongly Agree
9	Doing something beneficial for students with academic learning disabilities is	Extremely Undesirable	-2	-1	0	1	2	Extremely Desirable
10	Causing students with academic learning disabilities worry and concern is	Extremely Undesirable	-2	-1	0	1	2	Extremely Desirable
11	Doing something beneficial for students who do not have disabilities is	Extremely Undesirable	-2	-1	0	1	2	Extremely Desirable
12	As a teacher, I will do extra work for the benefit of students.	Unlikely	-2	-1	0	1	2	Likely
13	Teachers in the field think schools should use inclusive educational settings as an option for students with academic learning disabilities.	Strongly agree	1	2	3	4	5	Strongly disagree
14	My professors believe in the use of inclusion as an option for students with academic learning disabilities.	Strongly agree	1	2	3	4	5	Strongly disagree
15	My future students will like to learn in an	Strongly	1	2	3	4	5	Strongly

	inclusive educational environment.	agree							disagree
16	Preservice teachers like me approve of the use of inclusion as an option for students with academic learning disabilities.	Strongly agree	1	2	3	4	5	Strongly disagree	
17	Overall, I think inclusive educational environments are...	Harmful	1	2	3	4	5	Beneficial	
18		Pleasant	1	2	3	4	5	Unpleasant	
19		The wrong thing to do	1	2	3	4	5	The right thing to do	
20		Good practice	1	2	3	4	5	Bad practice	
21	Doing what other teachers do is important to me.	Not at all	-2	-1	0	1	2	Extremely	
22	Doing what my professors think I should do is important to me.	Not at all	-2	-1	0	1	2	Extremely	
23	The approval of my future students is important to me.	Not at all	-2	-1	0	1	2	Extremely	
24	The approval of my peers is important to me.	Not at all	-2	-1	0	1	2	Extremely	
25	I am likely to use progress monitoring in my classroom.	Strongly agree	-2	-1	0	1	2	Strongly disagree	
26	I am likely to implement IEP provisions in my classroom.	Strongly agree	-2	-1	0	1	2	Strongly disagree	
27	I am likely to use research-based practices in my classroom.	Strongly agree	-2	-1	0	1	2	Strongly disagree	
28	I am likely to collaborate with other professionals on the education of my students.	Strongly agree	-2	-1	0	1	2	Strongly disagree	
29	People who are important to me think inclusive educational environments are beneficial for students with academic learning disabilities.	Strongly Disagree	1	2	3	4	5	Strongly Agree	
30	I have control over how much or how often I collaborate with other professionals to make decisions about students.	Strongly agree	1	2	3	4	5	Strongly disagree	
31	It is expected of me that I approve of heterogeneous classroom groupings (e.g. disabled and nondisabled).	Strongly Disagree	1	2	3	4	5	Strongly Agree	
32	I intend to teach in an inclusive educational environment.	Strongly Disagree	1	2	3	4	5	Strongly Agree	
33	I will have the resources needed to use/ implement progress monitoring in my	Unlikely	1	2	3	4	5	Likely	

classroom.

34	I feel social pressure to favor an inclusive educational environment.	Strongly Disagree	1	2	3	4	5	Strongly Agree
35	Programs or professional development will be available so I can continue to learn about research- based practices.	Unlikely	1	2	3	4	5	Likely
36	I feel capable of implementing IEP provisions in my classroom	Strongly Disagree	1	2	3	4	5	Strongly Agree
37	I expect to teach in an inclusive educational environment.	Strongly Disagree	1	2	3	4	5	Strongly Agree
38	I want to teach students with different levels of ability.	Strongly Disagree	1	2	3	4	5	Strongly Agree
39	People who are important to me believe inclusive educational environments promote acceptance of differences among students.	Strongly Disagree	1	2	3	4	5	Strongly Agree
40	If you are offered a position as a teacher in an inclusive educational environment, how likely are you to accept the job?	Unlikely	1	2	3	4	5	Likely

Appendix E: Scoring Key for the TPBI

Scoring Key for the TPBI instrument

Question Numbers	Response format	Items requiring reverse scoring	Items requiring internal consistency analysis	Items requiring multiplication	Construct Measured
2 to 4, 8	1 to 5			3 x 9; 2 x 10; 8 x 11; 4 x 12	Behavioral Beliefs
9 to 12	-2 to +2	10			Outcome Evaluation
13 to 16	1 to 5	13,14,15,16		13 x 21; 14 x 22; 15 x 23; 16 x 24	Normative Beliefs
21 to 24	-2 to +2				Motivation to comply
1, 6 to 8	1 to 5	6,7		5 x 25; 6 x 26; 7 x 27; 1 x 28	Control Belief Strength
25 to 28	-2 to +2	25,26,27,28			Control Belief Power
17 to 20	1 to 5	18, 20	17 to 20 (after recoding)		Direct measure of Behavioral Beliefs
29, 31, 34, 39	1 to 5		29, 31, 34, 39		Direct measure of Subjective Norms
30, 33, 35, 36	1 to 5	30	30, 33, 35, 36 (after recoding)		Direct measure of Perceived Behavioral Control
32, 37, 38	1 to 5		32, 37, 38		Generalized Intention
40	1 to 5				Intention statement

Scoring instructions:

- Analysis using the direct measures of the predictor variables

Recode items specified in the chart above.

Conduct an item analysis on items relating to the direct measures to establish internal consistency. Rephrase items as needed (goal > 0.6)

For all direct measures of attitude (behavioral belief, normative belief, and Perceived Behavioral Control), I will calculate the mean of the responses in each construct to receive a construct score.

Using a multiple regression procedures, enter intention as the dependent variable, and the direct measures of attitude, subjective norm, and PBC as the predictor variables

- Analysis using the indirect measures

For indirect measures of attitude (e.g. behavioral belief and outcome evaluation; normative belief and motivation to comply), I will weight each belief using multiplication to create a new variable total represents the weighted score for each belief:

multiply the response in one construct by the response in the corresponding construct. The resulting products are summed across the construct to create an overall construct attitude score.

$$A = (a \times e) + (b \times f) + (c \times g) + (d \times h)$$

Where A = total attitude score

a, b, c, and d are scores for each of 4 behavioral (or normative, or PBC) beliefs

e, f, g, and h are scores for outcome evaluations (or motivation to comply, or power to influence) relating to each previous belief.

The possible range of scores is -40 to +40 for each construct. A score of zero is considered neutral.

Compute bivariate correlations between direct and indirect measures of the same construct to confirm validity of the indirect measures.

Using a multiple regression procedure, enter directly- measured attitude scores as the dependent variable, and the sum of the weighted behavioral beliefs as the predictor variables. (use the same approach for each subjective norms and PBC constructs)

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